Jan. 18, 1927. 1,614,843

R. B. MELLER

CARTON

Filed July 31, 1925

FIG. 1.

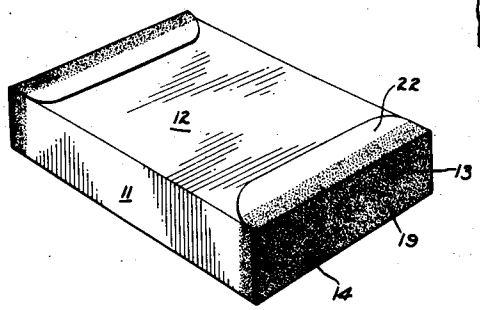


FIG. 2.

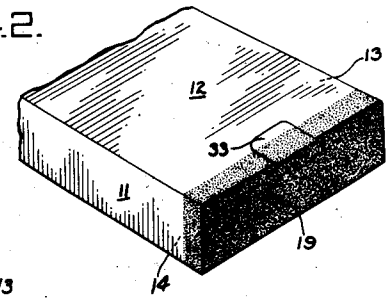


FIG. 3.

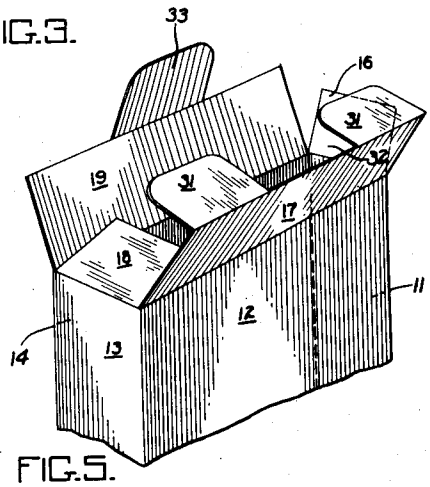


FIG. 4.

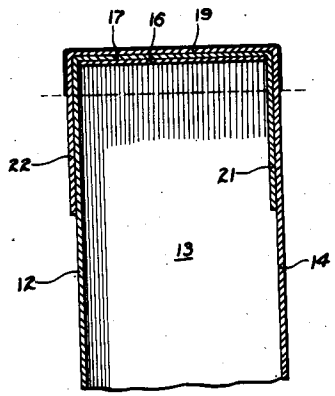


FIG. 5.

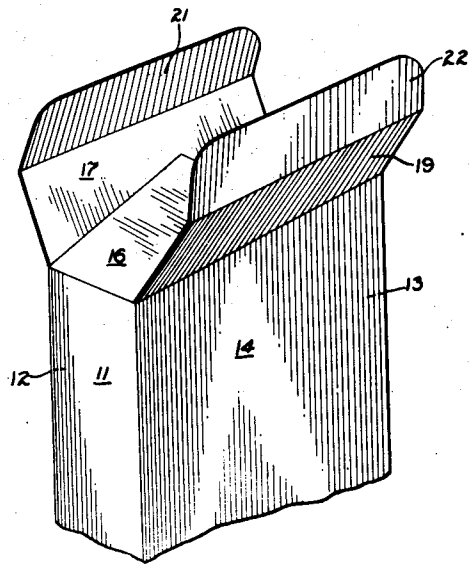
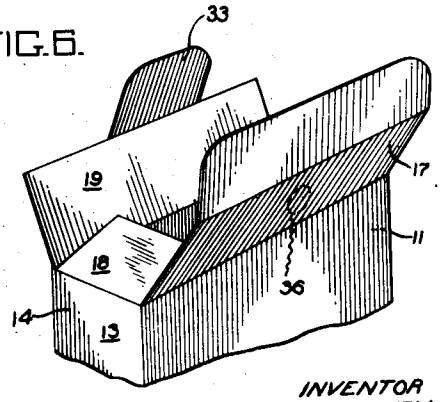


FIG. 6.



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UNITED STATES PATENT OFFICE.

REGINALD B. MELLER, OF ALAMEDA, CALIFORNIA.

CARTON.

Application filed January 31, 1925. Serial No. 6,006.

The invention relates to a receptacle and particularly to a sealed, folded carton.

An object of my invention is to provide an air tight container from a single folded sheet.

A further object of the invention is the production of an air tight package which can be readily opened without mutilating any part of it.

The invention possesses other objects and features of advantage, some of which with the foregoing will be set forth in the following description of the preferred form of my invention, which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that I do not limit myself to the showing made in said drawings and description, as I may adopt variations of the preferred form within the scope of my invention as set forth in the claims.

Referring to the drawings:

Figure 1 is a perspective view of the carton of my invention, the stippled portions indicating the parts covered by the sealing material.

Figure 2 is a perspective view of a portion of my carton showing a modified form of end closure.

Figure 3 is a perspective view of the carton shown in Figure 2, with the end open to show the structure.

Figure 4 is a cross sectional view of the carton.

Figure 5 is a perspective view of the carton shown in Figure 1, with the end open to show the structure.

Figure 6 is a perspective view of the open carton, showing another modification of the invention.

Broadly my invention comprises a carton, the lateral sides of which are secured together in tubular form and have appended flaps to form the closure for the ends. The flaps on two of the oppositely disposed sides have tabs which in closed position each lie against the surface of the opposite side, one on the inside and one on the outside. When the package is filled and ready to be sealed, the ends of the closed carton are passed thru a shallow bath of sealing material which not only renders the package air tight, but adhesively unites the flaps in closed position. The bath of sealing material is preferably so shallow that it extends over only a portion of the tab lying on the outside, so that the uncovered end of the tab may be readily caught by the fingers and the tab stripped back to open the package. A package sealed in this manner can be easily opened without mutilating any part of the carton, so that the contents of the opened package can be protected after the seal has been broken by folding in the end flaps, which will make a tight closure, tho not a sealed one.

There are many types of packages now being used, but as far as I am aware, none of them are air tight, without the addition of an auxiliary covering or lining, and they cannot be opened without partially destroying them. The housewife is constantly faced with the problem of protecting the contents of partially emptied cartons, as the original containers, when opened, are frequently torn to such an extent that they cannot subsequently be closed. My invention contemplates a carton which is air tight in itself, and which can be used to hold the product directly, or used for a container for enclosure in a heavier carton which may be of the usual form. The carton may be made of untreated paper, but I prefer to use a paraffined paper or board. The folding operation is simple and lends itself readily to automatic machine performance. A carton made in accordance with my invention is sufficiently strong for handling and shipping, but at the same time is readily opened by stripping back the tab secured upon the side by the adhesive sealing material.

In detail my invention comprises a carton having lateral sides 11, 12, 13 and 14 secured together in tubular form, and provided on each end with flaps 16, 17, 18 and 19 respectively. The oppositely disposed flaps 16 and 18 may be of any suitable length and in some instances I have found it advisable to make them long enough to touch each other, as shown in Figure 5, and in other instances it is preferable to make them shorter, as shown in Figure 3. The main object of these flaps is to reinforce the folds adjacent the sides 13 and 11, and this is true regardless of their length. The flap 17 is provided with a tab 21 which is folded inwardly and rests against the inner surface of the side 14. The flap 19 is provided with a tab 22, similar to the tab 21, but which folds over and rests upon the outer surface of the side 12.

To seal the ends and to secure the flaps and tabs in position, the carton is closed, and held in closed position, while first one end and the other is passed thru a shallow bath of sealing material, preferably paraffine. Before the carton is released it may be moved upon a cold plate or subjected to a current of cooling fluid, for a sufficient time to harden the sealing material, so that the flaps are adhesively held together and an air tight package is formed. I have found it advisable to gauge the depth of the sealing material so as to permit the tab 22 to extend above the portion coated. This facilitates opening the package, as the unsecured end of the tab forms a convenient grip.

The shape of the tabs 21 and 22 as illustrated in Figures 1 and 5 may not be desirable in some cases and to meet other requirements, I provide an alternative form as shown in Figure 3. In this form, the flap 17 is provided with two tabs 31, which are folded inwardly to lie against the inner surface of the side 14. The use of these spaced tabs offers another advantage, in that they produce a recess bordered by the edge 32 between the tabs which permits the ready insertion of the finger end to lift the inner flap. The flap 19 is provided with a narrow tab 33 which operates in the same manner as the tab 22, but which is less likely to catch and be accidentally opened. Another advantage of this structure lies in the fact that the blanks may be cut with greater economy of material, since the single tab of one blank lies between the double tabs of the adjacent blank.

In Figure 6 I have shown another embodiment of my invention. Frequently it is desired to have a ready discharge from a package which can be closed after the desired amount of the contents of the package have been removed. For this purpose, I partially sever a portion 36 in the inner flap 17. During the sealing step the inner flap 17 becomes fixed to the outer flap so that when the outer flap 19 is stripped back, the partially severed portion adheres to its inner surface, thus forming an aperture in the closed inner flap thru which the contents of the package may be discharged, without opening the inner flap. After the desired amount of the contents of the carton have been removed and the package closed a close contact is made between the two flaps so that a higher degree of protection to the remaining contents of the package is offered than has been heretofore possible.

Paraffined board lends itself particularly well to the manufacture of my carton, as the paraffine on the board has a tendency to coalesce during the sealing process, so that the inner flaps as well as the outer flaps are sealed. This inner sealing greatly aids and strengthens the air tight end and, due to the thinness of the coat of paraffine, the seal is readily broken and opened without mutilating the carton.

I claim:

1. A folded carton having an end flap the end of which forms a tab overlying one of the lateral side portions of the carton, and a coating of sealing material over the end flap and a portion of the tab for holding the flap and tab in position and forming an air tight end.

2. A package comprising opposite side portions each having an extension forming an end flap and a tab, the tabs on the end flaps lying against the surfaces of the side portions, one on the inside and one on the outside, and a sealing material closing the exposed joints and forming the sole means for holding the outer flap in position.

3. A folded carton having an end flap the end of which forms a tab overlying one of the lateral side portions of the carton, said end flap lying wholly without said carton, and a coating of sealing material over the end flap and a portion of the tab for holding the flap and tab in position.

4. The method of sealing and retaining a folded carton in folded form which comprises passing the folded portions of the carton thru a shallow bath of sealing material while holding the folded portions in position, and permitting the sealing material to harden before releasing the carton.

In testimony whereof, I have hereunto set my hand.

REGINALD B. MELLER.