March 19, 1935. N. S. ROSS 1,994,923

PACKAGE

Filed Feb. 2, 1933

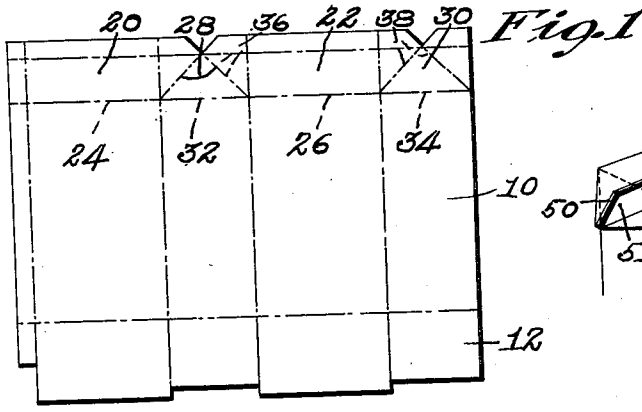


Fig. 1

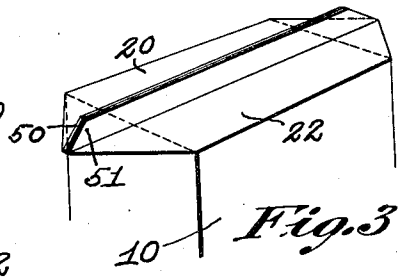


Fig. 3

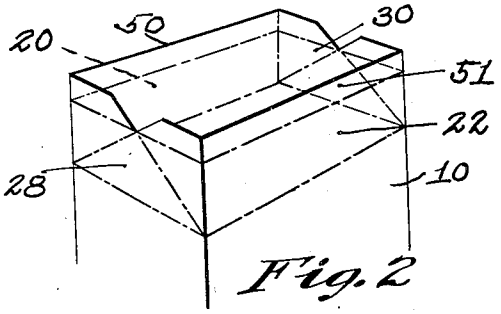


Fig. 2

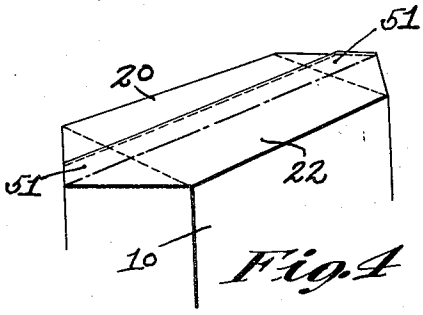


Fig. 4

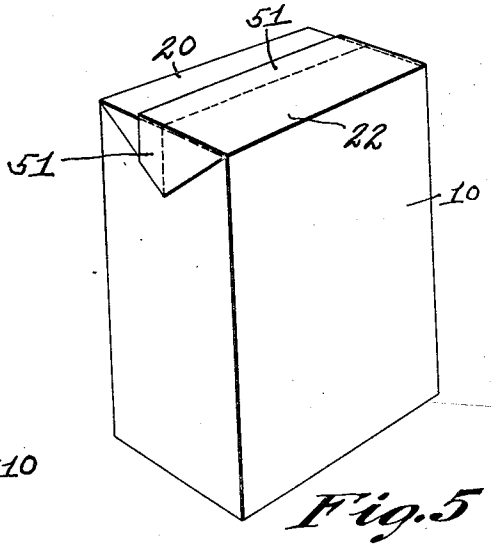


Fig. 5

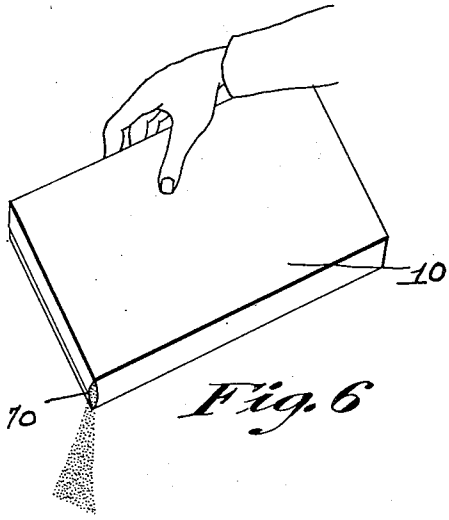


Fig. 6

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PACKAGE

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Application February 2, 1933, Serial No. 654,861

5 Claims. (Cl. 229—17)

This invention relates to a package.

The invention has for an object to provide a novel and improved construction of package in which an open end of the package is closed and sealed in a novel manner to form a sift-proof package which is particularly adapted for use in the packaging of very finely divided siftable material such as flour.

Another object of the invention is to provide a package of the character specified having provision for the discharge of the contents of the package in a novel and superior manner.

A further and more specific object of the invention is to provide a carton having the top closed in a novel and superior manner adapted to render the carton sift-proof when the top is closed and sealed.

With these general objects in view and such others as may hereinafter appear, the invention consists in the package and/or carton hereinafter described and particularly defined in the claims at the end of this specification.

In the drawing illustrating the preferred embodiment of the invention, Fig. 1 is a blank from which the present package or carton may be formed; Figs. 2, 3, 4 and 5 are perspective views illustrating successive steps in the closing and sealing of the carton, Fig. 5 representing the finished or completed carton or package; and Fig. 6 is a perspective illustrating the novel discharge opening formed at the corner of the package, as will be described.

In general, the invention contemplates a construction of package, and particularly a carton, in which an open end of the carton is closed and sealed in a novel and improved manner adapted to provide a sift-proof package or carton which may be used with advantage in the packaging of very finely divided flowable materials such as flour. In the various prior forms of packages of which I am aware, it has been extremely difficult or impossible to eliminate the sifting of the fine flour and similar material outwardly through the folds of the end closing members of such packages. In accordance with the present invention, the open end of the package or carton to be closed and sealed, and which in practice usually comprises the top of the carton or package, is closed by portions of the body portion of the package folded to form a closure and also to form outwardly extending flaps and a complete adhesive seal is provided extending across both end flaps and said closure. In the preferred form of the invention the body portion is folded inwardly to form two top closing flaps which cooperate to form the top closure for the carton or package, and the opposite end portions of the top of the package or carton are simultaneously folded outwardly to form two end flaps. At the same time each end flap is itself folded so as to impart a triangular shape thereto. The end flaps and top closing flaps form part of the mouth of the package, and a pair of external sealing tabs are provided formed as extensions of each top closing flap and each end flap so that after the folding of the top closing flaps inwardly and of the end flaps outwardly, the external sealing tabs extend across the mouth of the package and across the end flaps. The sealing tabs are adhesively affixed together to provide a completely sealed and sift-proof closure for the open end of the package, and both the sealing tabs and end flaps may be folded down upon and adhesively secured to the top and ends of the package respectively. The present package lends itself to the convenient discharge of material from the package, and for this purpose one end flap may be cut away to provide a narrow elongated slit which is normally closed by the resiliency or spring of the material forming the carton or package when the package is in an upright position and which is opened by the weight of the contents of the package to form a pouring opening when the package is inverted.

Referring now to the drawing, in the illustrated package 10 represents the body portion which may be of any usual or preferred construction and which may be formed up in the usual manner from the blank shown in Fig. 1. The body portion is preferably provided with the usual bottom forming flaps 12 adapted to be folded and adhesively secured to form the bottom of the package. The top or mouth of the package is closed in a novel and superior manner designed to facilitate the closure of the package by automatic machine and to provide a sift-proof closure for the top or mouth of the package.

Referring to Figs. 2, 3 and 5, the improved top closure for the package is formed by folding inwardly the upper portion of the body portion about score lines 24, 26 at the upper end of two of the opposite sides of the package to form two top closing flaps 20, 22. The top closing flaps 20, 22 are of a width such that when folded down, each closes one half the mouth of the package. The opposite ends of the mouth of the package are simultaneously folded outwardly about the score lines 32, 34 to form two end flaps 28, 30 and, at the same time, each end flap is folded along intermediate score lines 36, 38 so as to form the triangular shaped outwardly folded end flaps 28,

30, as shown in Fig. 3. The top closing flaps 20, 22 and the end flaps 28, 30 are integral with the body portion and each end flaps is formed as a continuation of the adjacent top closing flaps.

In order to seal the mouth of the package in a manner such as to provide a sift-proof closure for finely divided materials such as flour, a pair of external sealing tabs 50, 51 are formed as extensions of each top closing flap 20, 22 and of each end flap 28, 30 so that when the top closing flaps are folded down and the end flaps folded outwardly into the position shown in Fig. 3, the external sealing tabs 50, 51 will extend across the mouth of the package and across the end flaps and when adhesively affixed together provide a complete sealed closure for the top or mouth of the package, thus eliminating the sifting of the finely divided material which has always heretofore occurred between the top closure folds of the usual form of prior art package.

In the closing of the top of the present package, the top closing flaps 20, 22 may be folded down into a horizontal position closing the top of the package and the end flaps simultaneously folded outwardly into a substantially horizontal position, as shown in Fig. 3. The sealing tabs 50, 51 are preferably folded at right-angles to the folded-down top closing and end flaps so that with the parts in the position shown in Fig. 3, the sealing tabs assume an upstanding position with their faces in contact.

In order to secure together the sealing tabs 50, 51, they may be conveniently bent outwardly from their upstanding position, shown in Fig. 3, to expose their contacting faces and in this condition passed under an adhesive applying device for the application of adhesive thereto. Thereafter the sealing tabs may be pressed together and being external of the closed package may be subjected to relatively high pressure enabling a most effective seal to be made. Heretofore experience has shown that the bottom of a carton could be more effectively sealed than the top because of the fact that in sealing the bottom of the carton, high pressure could be exerted upon the bottom closing flaps squeezing them against the bottom of the usual block, while in closing the top of the carton only a limited pressure could be used, limited by the spring of the carton board, so that a relatively inefficient seal resulted.

After the tabs 50, 51 have been thus sealed together, they may and preferably will be folded down into contact with and adhesively secured to one of the top closing flaps 20, 22 and the end portions of the sealing tabs may be folded down together with the end flaps onto the ends of the package. The end portions of the sealing tabs are preferably adhesively affixed to the folded-down end flaps and the latter adhesively affixed to the body portion of the package forming the completely closed and sealed package, shown in Fig. 5. To enhance the appearance of the finished package, the ends of the tabs 50, 51 may be cut to conform to the edge of the end flap in the manner illustrated in Fig. 5.

In some instances it may be desirable to provide the sealed package with a pouring opening 70 in order to facilitate discharging the contents of the package and for this purpose the outwardly folded end flaps lend themselves particularly to the convenient formation of such an opening. By cutting off one end flap along its line of connection with the body portion and with the top closing flaps, a slit or opening 70 is provided at one corner at the top of the package permitting the contents of the package to be conveniently poured therethrough when the package is inverted. The opening 70 is enlarged by the effect of the weight of the contents of the package on the walls of the opening enabling a substantial stream of material to be discharged and when the package is returned to an upright position, the inherent spring in the material forming the body of the package operates to contract the walls of the opening 70 to substantially close the slit or opening 70.

From the description thus far it will be observed that the present construction of package is one in which an open end, and particularly the top of the package, may be closed in such a manner as to provide a complete and sift-proof sealing of the contents within the package. The sealing tabs 50, 51 extending completely across the package afford a complete and continuous seal between the two half portions of the top closure, each of which comprises the top closing flap and the two contiguous and integrally formed end flaps. In this manner, flour and other very fine material may be successfully packaged without liability of sifting outwardly through unsealed folds as has been the case in prior packages of which I am aware.

It will also be observed that the present closure enables a substantial saving in material to be made as compared with prior cartons in which the top was closed by two overlapping flaps, each of which had an area equal to that of the mouth of the carton.

While in its broader aspects the invention may be embodied in various forms of packages and in packages made of various materials, nevertheless, it is preferred to utilize the invention in the production of a carton.

While the preferred embodiment of the invention has been illustrated and described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:—

1. A sift-proof package comprising a body portion having opposed portions thereof folded inwardly and outwardly to form integral top closing flaps and outwardly extending end flaps, respectively, and to form an integral sealing tab upon each half of the thus folded portion of the body portion, said sealing tabs extending entirely across the package and across the end flaps and being adhesively secured together and folded down upon one of the top closure members and upon the end flaps, said end flaps with their associated portions of the folded sealing tabs being folded down against the ends of the package.

2. As a new article of manufacture, a sift-proof package comprising a body portion having a sift-proof end closure comprising portions of the body portion folded to close the end of the package and also form outwardly folded end flaps, and a pair of integral sealing tabs formed by extensions of said folded portions adhesively secured together and extending across the end of the package and across the end flaps.

3. As a new article of manufacture, a carton comprising a body portion having top closing flaps and portions cooperating to form outwardly projecting end flaps and having portions of all of said flaps upstanding vertically and adhesively

secured together to form a continuous integral sealed tab extending across the entire end of the package and across the end flaps.

4. As a new article of manufacture, a sift-proof package comprising a body portion having a sift-proof end closure comprising portions of the body portion folded to close the end of the package and also form outwardly folded end flaps, and a pair of integral sealing tabs formed by extensions of said folded portions adhesively secured together and extending across the end of the package and across the end flaps, said secured sealing tabs being folded down upon the end closure and the end flaps, the said end flaps and their associated portions of the folded sealing tabs being folded down against side walls of the package.

5. As a new article of manufacture, a carton comprising a body portion having top closing flaps and portions cooperating to form outwardly projecting end flaps and having portions of all of said flaps upstanding vertically and adhesively secured together to form a continuous integral sealing tab extending across the entire end of the package and across the end flaps, said sealing tab being folded down upon one of the top closing flaps and the end flaps, the said end flaps and the superimposed end portions of the sealing tab being folded down against side walls of the package.

NORMAN STANLEY ROSS.