Aug. 11, 1942. H. KONDOLF 2,292,573

BAG OR CONTAINER

Filed Nov. 15, 1939 2 Sheets-Sheet 1

Fig. 1.

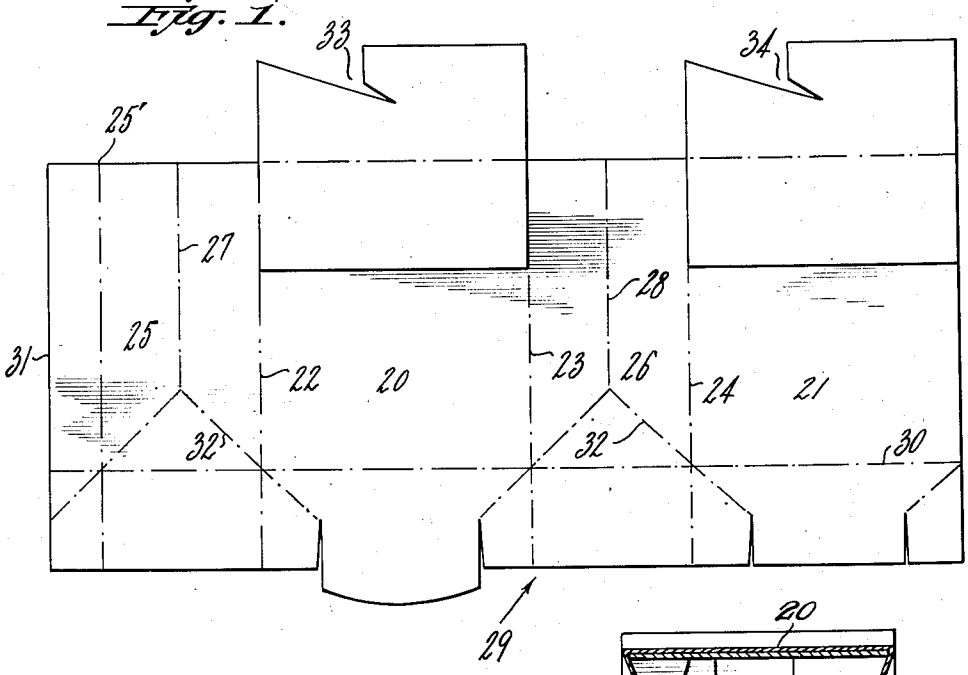
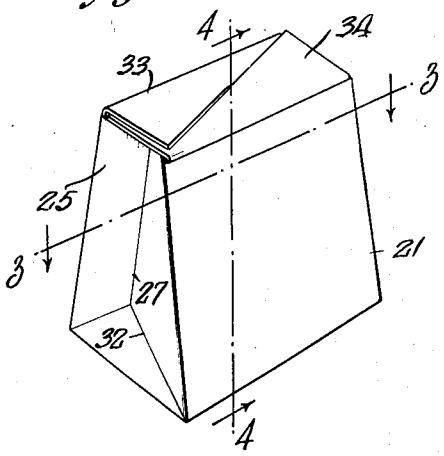


Fig. 2.



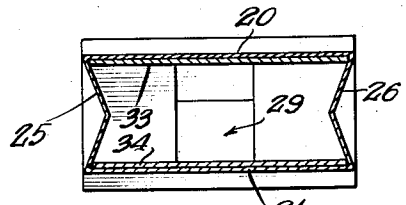


Fig. 3.

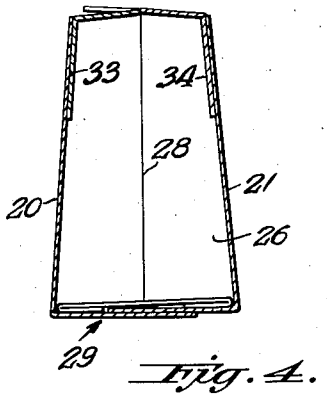


Fig. 4.

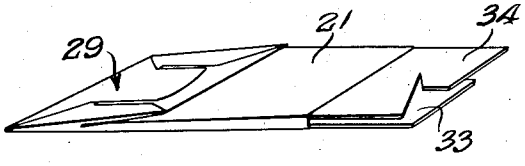


Fig. 5.

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Fig. 6.

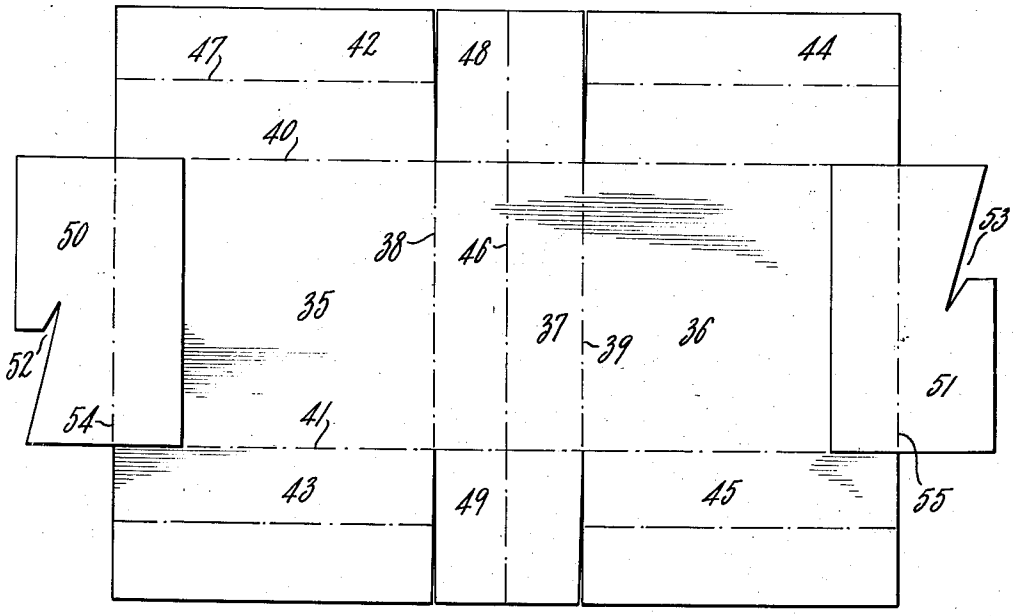
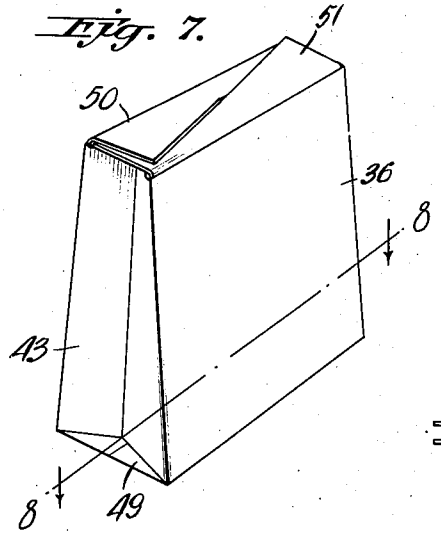


Fig. 7.



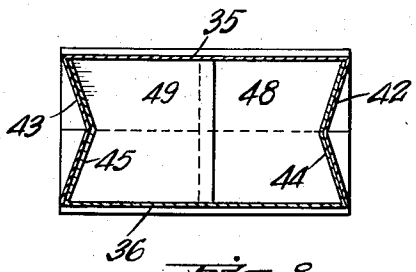


Fig. 8.

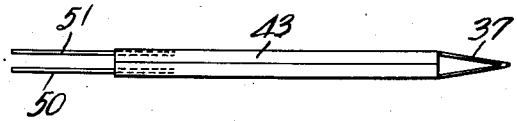


Fig. 9.

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Patented Aug. 11, 1942

2,292,573

UNITED STATES PATENT OFFICE

2,292,573

BAG OR CONTAINER

Henry Kondolf, New York, N. Y., assignor, by mesne assignments, to International Paper Company, New York, N. Y., a corporation of New York

Application November 15, 1939, Serial No. 304,518

3 Claims. (Cl. 229—41)

My present invention relates to improvements in packages and more particularly to bags or cartons designed to facilitate the handling of bottled commodities and bulk materials. My invention also comprehends the provision of new and improved forms of blanks from which the cartons may be formed. The problems encountered in handling bulk material and bottled commodities are numerous and varied, and a package which embodies features reducing the labor involved in forming the package and the cost of shipping is of great importance to the packaging industry and to retail establishments. In the case of bottled commodities it is necessary that the bottles be protected from breakage and that an attractive package be used. In the case of bulk materials, it is equally necessary that the package be attractive and possess wide sales appeal.

Accordingly, the chief object of my invention is to obtain the above results while at the same time reducing the size of the package to a minimum so that the packages may be shipped and handled in an outer container or carton, for example, a carton such as is disclosed and claimed in my Patent No. 2,178,076, dated October 31, 1939. Numerous packages have been devised with these ends in view, some of which afford excellent protection at the expense of space, while the reverse is true of other types of packages. Among the many objects of my present invention is the provision of a package which will, in the case of bottled commodities, follow in general the contour of packaged bottles to the end that a neat and attractive package may be provided.

Another feature of my present invention is the provision of a bag, carton or package whose end walls are so constructed and arranged as to permit, depending upon the shape of the contained articles, the side walls to be tapered from the bottom to the top of the package.

Another feature of my present invention is the provision of my package which may be sold as a unit and which will afford protection to the bottles packaged therein.

Another feature of my present invention is to provide a carton for packaging articles without the use of expensive packaging machinery such as stapling or sewing units, my package being self-sealing without so much as a sealing strip being required to close the carton.

My new and improved package is so designed that it may be made from a substantially rectangular one piece blank of any staple material, as, for example, cardboard, strawboard, or of the type known as single or double faced corrugated board. Preferably the material used is flexible and is usually designated in the industry as being nine point kraft. With my invention a maximum amount of protection is afforded the packaged articles without an appreciable waste of material or loose packing.

A preferred form of my invention is illustrated in the accompanying drawings and a detailed description given in the following specification.

Referring now to the drawings wherein like numerals indicate like parts:

Fig. 1 is a plan view of my new and improved form of blank;

Fig. 2 is a perspective view showing the carton as formed from the blank disclosed in Fig. 1;

Fig. 3 is a horizontal sectional view taken along the lines 3—3 of Fig. 2;

Fig. 4 is a vertical sectional view taken along the lines 4—4 of Fig. 2;

Fig. 5 is a side view of the carton showing the same collapsed for shipment;

Fig. 6 is a plan view of a carton blank constituting a modification of my invention;

Fig. 7 is a perspective view of the carton shown in Fig. 6, the closure flaps being shown in closed position;

Fig. 8 is a horizontal sectional view of the carton; and

Fig. 9 is a side view of the carton showing the same collapsed for shipment.

Referring now to the modification disclosed in Fig. 1 in which like numerals indicate like parts, I have shown a preferred form of my invention. The container may either be made from a blank or it may be made from a continuous web of material formed into a tube and provided with the conventional type of automatic opening or ABC bottom. This latter form of bottom and method of bag manufacture is so well known in the art that the following description will have reference to the manufacture of the container from a blank rather than its manufacture from a tube. Moreover, when the container is made from kraft or chipboard or the like, it will be preferable to make the container from a blank of the form illustrated in either Figs. 1 or 6.

The blank itself is substantially rectangular in shape and therefore lends itself to machine operation with little or no waste of the material between the blanks. This feature is of extreme importance in machine operation since the loss in waste of material forming many of the well

known cartons from board or similarly relative rigid material approximates twenty-five per cent (25%) of the total material used. The blank is divided into a front wall panel 20 and a rear wall panel 21. The side-wall or end-forming panel 25 is carried by the front wall panel 20 along score line 22 and the opposite side-wall or end-forming panel 26 is positioned between the score lines 23 and 24. These side-wall or end-forming panels 25 and 26 are provided with medially disposed score lines 27 and 28 so as to form gussets in the finished container. The bottom-forming members designated generally by the numeral 29 are attached to various wall-forming panels along score line 30. Inasmuch as the specific type of bottom forms no part of the invention the specific details of construction of the bottom will be omitted. Suffice it to say that the bottom so formed is of the conventional automatic opening or ABC type. Attached to side-wall or end-forming panel 25 along score line 25' is a flap 31 which is secured to the end edge of the rear wall-forming panel 21 when the box is set up. If the container is made in the normal course of bag manufacture this flap constitutes that portion of the web of material which is overlapped when the tube is formed. As is well known the longitudinal edges of web material are overlapped and secured together in order to form a tube. The diagonally disposed score lines 32 whose apices merge with score lines 27 and 28 are those score lines formed during the formation of the automatic type or ABC type of bottom. When board making material is used these score lines 32 are preformed so that the bottom may be readily brought into its operative position.

After the blank has been scored, or after the bag has been made on the usual type of bag making machine cover, section 33 is secured to the front wall-forming panel 20 and a similarly shaped cover section is secured to the rear wall-forming panel 21. The material from which these cover sections are formed is of heavier basis weight than the material used in forming the container proper so that when the container is set up and the cover sections are brought into overlapping relation and secured together by interlocking the diagonally disposed slots formed in said cover sections, the container will be provided with a flat closure of substantial width.

As a feature of my preferred form of invention after the container has been set up and filled the cover sections may merely be overlapped and secured together by the use of an adhesive containing latex. Such an adhesive has the property of adhering readily to itself, but inasmuch as the adhesive on the individual cover sections of each blank will not contact with the adhesive on the corresponding sections of adjacent blanks, the blanks may be shipped flat if desired. The container lends itself readily to the packaging of bulk material such as, for example, potatoes, oranges and vegetables of various types.

If it be desired to ship the container after it has been formed from a blank, it will assume the position shown in Fig. 5 due to the construction of the automatic opening or ABC type of bottom. In this form it will be appreciated that an adhesive containing latex cannot be used in order to form the preliminary closing due to the fact that the adhesive on the cover sections would be in contact with the similarly coated sections of adjacent containers. In operation, the container, after being filled with the desired commodity and sold to a consumer, may readily be transported to its destination and opened. When the user desires to close the container all that is necessary is to interlock the diagonally positioned slits in the cover sections thereby providing at all times, during the use of the packaged commodity, a package attractive in appearance and one which gives substantial protection to the packaged commodity.

Referring now to the modification of the invention disclosed in Figs. 6 to 9 inclusive, I have shown a container primarily adapted for the packaging of bottles and cans of conventional shape as well as cans of conical shape. The blank from which the container is formed is substantially rectangular in shape and comprises front and rear wall-forming panels 35 and 36 separated from each other by a bottom 37. In order that the front and rear wall-forming panels may be folded in a plane normal to the bottom score lines 38 and 39 are provided. Attached to the front and rear wall-forming panels along score line 40 are end or side wall-forming panel sections 42 and 44. Attached to front and rear wall-forming panels 35 and 36 along score line 41 are complementary end or side wall-forming panels 43 and 45. The bottom forming panel 37 is provided with a medially disposed score line 46 in order that the container when set up may be collapsed as shown in Fig. 9 for shipment. Each of the end or side wall-forming panels is also provided with a medially disposed score line 47 in order to provide gusseted side or end walls whereby to complete the collapsing of the container when it is set up. Attached to the bottom-forming panel 37 along score lines 40 and 41 are provided bottom reinforcing flaps 48 and 49. Since the score line 46 extends through the bottom reinforcing flaps 48 and 49 the latter flaps when folded over against the bottom 37, will tend to stiffen the bottom. Attached to the front and rear wall-forming panels 35 and 36 are the cover-forming sections 50 and 51 provided with diagonally disposed slits 52 and 53 which interlock as indicated in Fig. 7 in order to complete the closure. In order to fold these cover sections they are scored as indicated by the dotted lines 54 and 55.

In forming the carton from the blank, front and rear wall-forming panels 35 and 36 are folded in a plane normal to the bottom 37 along score lines 38 and 39. Each of the end or side wall-forming panels 42, 43, 44 and 45 are folded, prior to the folding of the front and rear wall-forming panels, along score lines 40 and 41. The bottom reinforcing flaps 48 and 49 are folded through an angle of 180° in order to be superimposed upon the bottom 37 and the complementary end or side wall-forming panels are secured together by the use of any suitable adhesive.

An inspection of Fig. 7 will show that the container may be folded to conform to the general configuration of the packaged commodity. Assuming, for example, that bottles are packaged, the gusseted side or end walls will permit the container to follow in general the configuration of the bottle. When conical cans are packaged the gusseted walls will naturally become more pronounced from the bottom to the top of the container so as to provide a package having tapering walls. It is not necessary, of course, to use the interlocking sections of the cover in the initial package of the containers. Any suitable form of adhesive may be used in order to secure

the cover sections together, and to obtain the desired tapering of the walls. After the package has been once opened it can be easily closed by taking advantage of these interlocking portions.

From the above description it will be appreciated that I have provided a new and improved form of package which will facilitate the package and sale of bottled commodities and bulk commodities. In the first modification of the invention the package is designed generally for the packaging of bulk commodities. In the second modification of the invention the package is designed primarily for the packaging of bottled commodities. In each of the modifications shown the package may be used also as an advertising medium inasmuch as each presents walls having substantial areas.

As will be evident to those skilled in the art my invention admits of various modifications without departing from the spirit thereof and it is therefore to be understood that the invention is not necessarily limited to the form shown but is limited only as the invention is defined in the appended claims.

What is claimed as new is:

1. A bag comprising a bottom panel, side walls attached to said bottom panel along two opposite edges thereof, end wall panels carried by two opposite edges of each of said side walls, adjacent pairs of said end wall panels being overlapped and secured together to form the end walls of the bag, reinforcing flaps carried by the other two opposite edges of said bottom panel, the combined length of said reinforcing flaps being at least equal to the length of said bottom, said reinforcing flaps bieng folded into superposed relation with said bottom panel to form a bottom of at least double thickness, and closure flaps carried by the free edges of said side walls.

2. A bag comprising a bottom panel, side walls attached to said bottom panel along two opposite edges thereof, mutually coextensive end wall panels carried by two opposite edges of each of said side walls, adjacent pairs of said end wall panels being overlapped and secured together to form double thickness end walls of the bag, the end wall panels being scored to provide bellows folds in the end walls, reinforcing flaps carried by the other two opposite edges of said bottom panel, the combined length of said reinforcing flaps being at least equal to the length of said bottom, said reinforcing flaps being folded into superposed relation with said bottom panel to form a bottom of at least double thickness, and closure flaps carried by the free edges of said side walls.

3. A bag comprising a bottom panel, side walls attached to said bottom panel along two opposite edges thereof, mutually coextensive end wall panels carried by two opposite edges of each of said side walls, adjacent pairs of said end wall panels being overlapped and secured together to form double thickness end walls of the bag, the end wall panels being scored to provide bellows folds in the end walls, reinforcing flaps carried by the other two opposite edges of said bottom panel, the combined length of said reinforcing flaps being at least equal to the length of said bottom, said reinforcing flaps being folded into superposed relation with said bottom panel to form a bottom of at least double thickness, and closure flaps carried by the free edges of said side walls, said closure flaps being adapted to be intersecured to form a double thickness closure in a plane substantially parallel to the plane of the bottom of the bag.

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