Sept. 1, 1936. F. W. FOERSTNER ET AL. 2,053,217

DISPENSING CARTON

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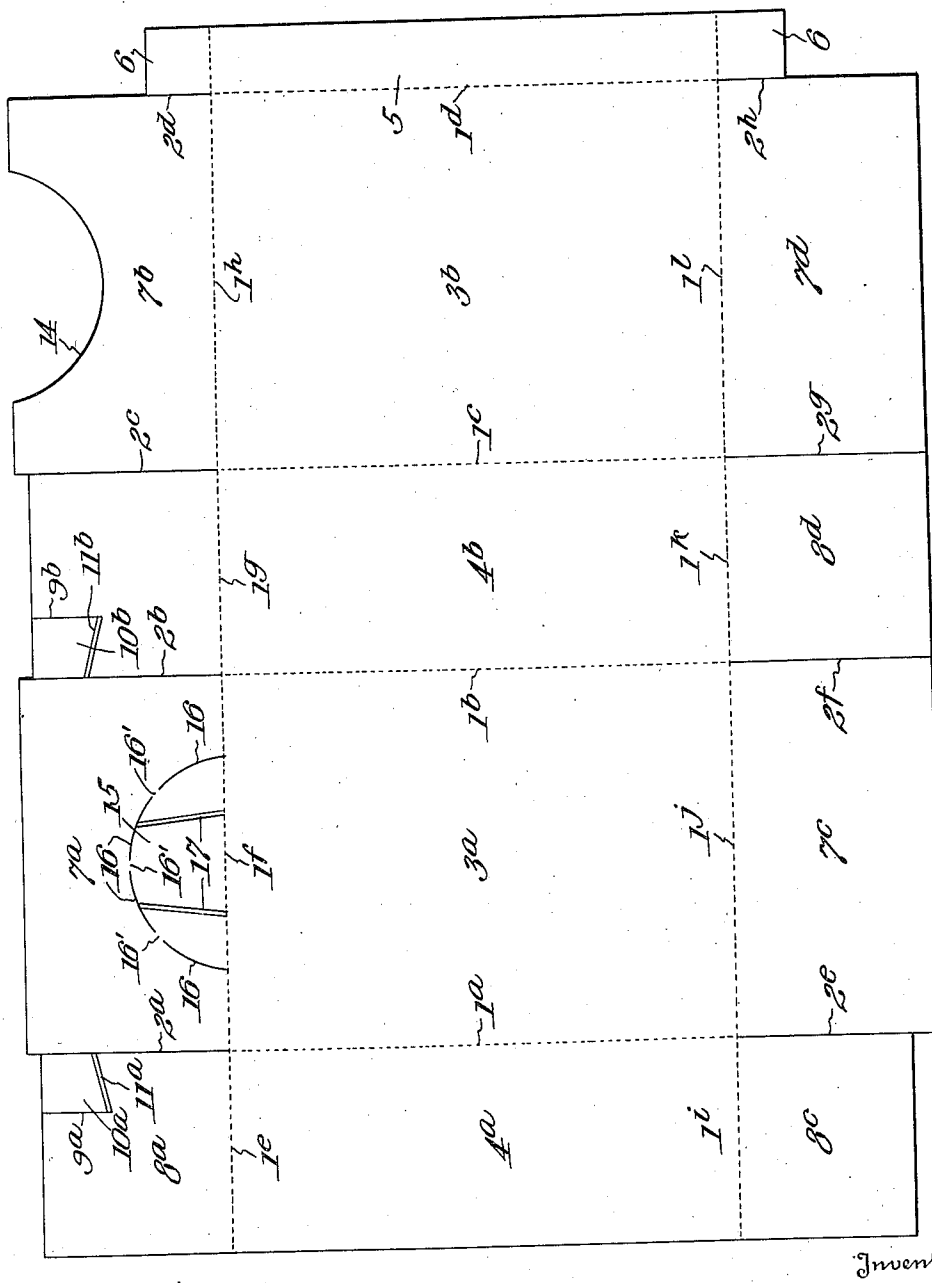


FIG. 1.

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FIG. 3.

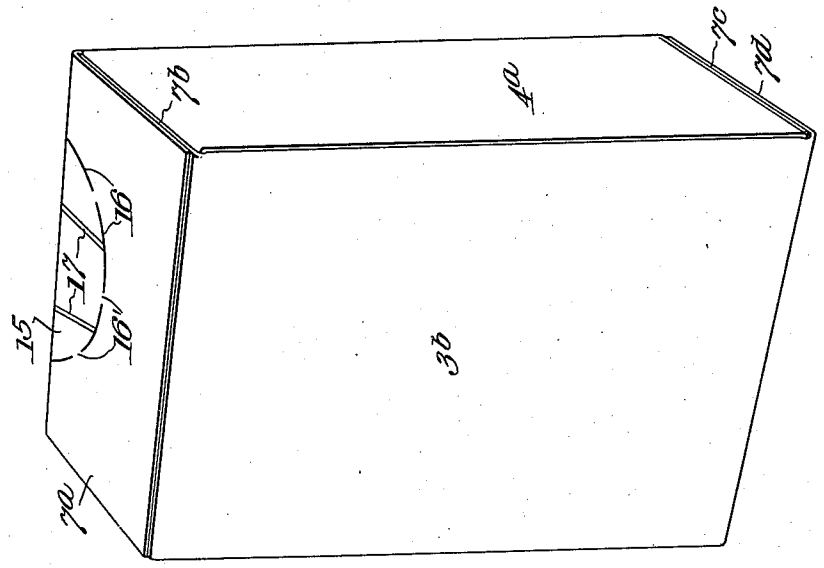
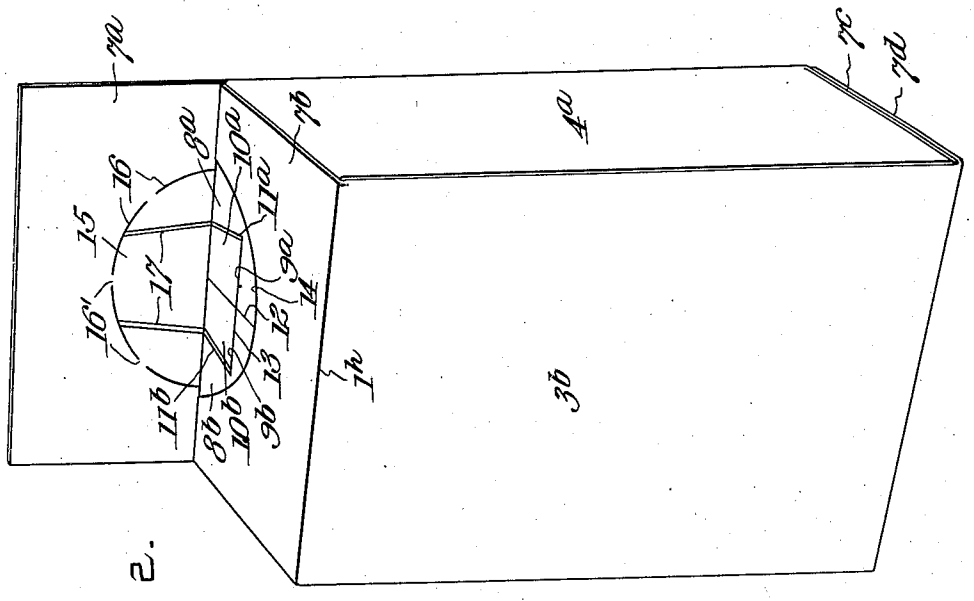


FIG. 2.



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FIG. 5.

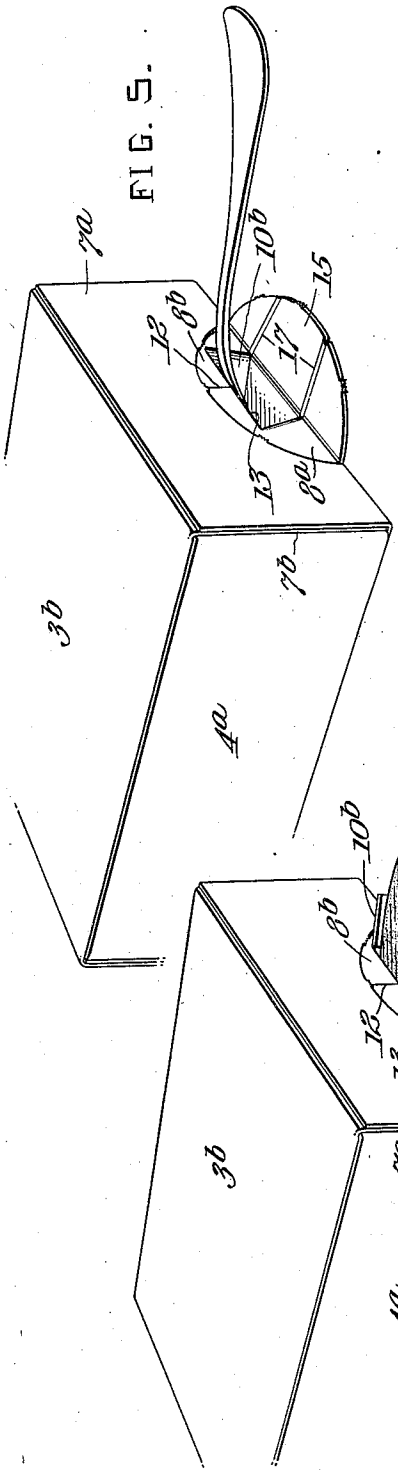
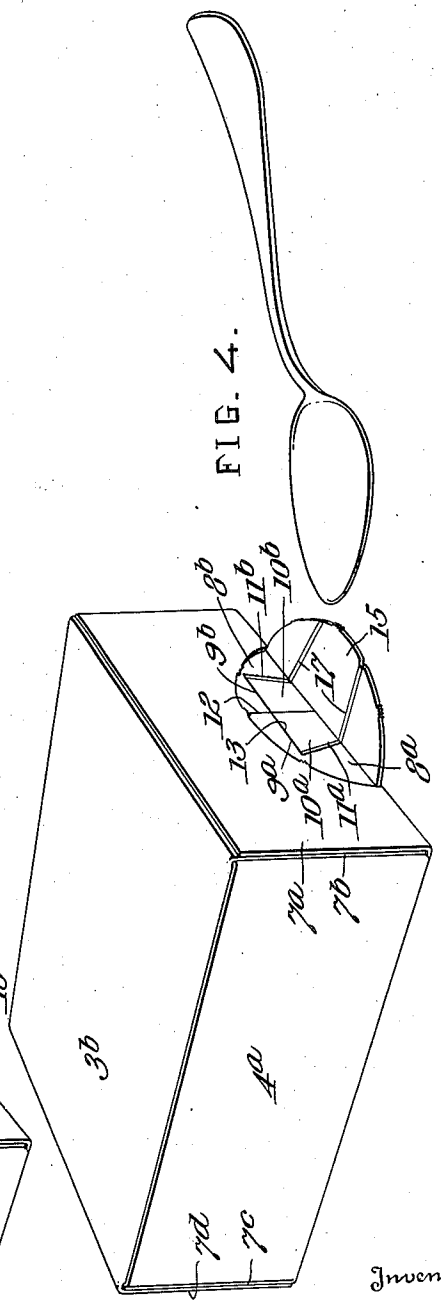


FIG. 6.

FIG. 4.



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UNITED STATES PATENT OFFICE

2,053,217

DISPENSING CARTON

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Application November 4, 1935, Serial No. 48,230

7 Claims. (Cl. 229—17)

This invention relates to cartons, and particularly to cartons of the folded blank, dispensing or pouring type.

One object of the invention is to provide a carton of the kind referred to, in which the dispensing or pouring opening is formed by parts of the carton so arranged and so functioning as to make possible substantially automatic closing of the opening, thus protecting the contents of the carton from deterioration and against the entrance of foreign substances.

Another object of the invention is to so form the dispensing or pouring opening as to provide a continuous straight edge by which the contents of a spoon may be leveled as the spoon, after insertion through the opening and into the carton and its contents, is withdrawn therefrom.

The invention consists in a dispensing carton having a body provided with an end structure composed of a plurality of flaps folded into overlapping relation, certain of said flaps slitted to provide hinged tabs swingable upon their hinges to form a dispensing opening which they normally close, and the other flaps having portions cut away and frangible therefrom, respectively, to expose such dispensing opening, all as will be explained hereinafter more fully and finally claimed.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated,

Figure 1 is a plan view of the blank from which the carton of the invention is formed.

Fig. 2 is a perspective view of the carton with the flaps thereof folded into such positions as to partially complete the formation of the end structure.

Fig. 3 is a view similar to Fig. 2 but showing the formation of the end structure completed.

Figs. 4, 5 and 6 illustrate the use of the carton in dispensing its contents, particularly when the dispensing or pouring opening thereof is employed for the insertion and withdrawal of a spoon with which the contents of the carton may be removed.

The blank from which the carton is formed is provided with lines of scoring 1^a, 1^b, 1^c, 1^d, 1^e, 1^f, 1^g, 1^h, 1^i, 1^j, 1^k and 1^l, and with slits or cuts 2^a, 2^b, 2^c, 2^d, 2^e, 2^f, 2^g and 2^h, by which it is divided into broad sides 3^a and 3^b, narrow sides 4^a and 4^b, a pasting flap 5 having tabs 6, end flaps 7^a, 7^b, 7^c and 7^d, attached to the broad sides 3^a and 3^b and end flaps 8^a, 8^b, 8^c and 8^d attached to the narrow sides 4^a and 4^b.

When the blank is folded upon the lines of scoring 1^a, 1^b, 1^c and 1^d, and the pasting flap 5 is secured adjacent to the free edge of the narrow side 4^a, the blank will be formed into a rectangular tube, as is customary in setting up cartons of this character.

In the further setting up of blanks for pouring or dispensing cartons, particularly where the pouring or dispensing opening is in one end of the carton, it is customary to complete the formation of the end in which the elements for providing the pouring or dispensing opening are located, and to leave the completion or sealing of the other end until after the carton has been filled.

Accordingly, in further setting up the carton of the invention, the flaps 8^a and 8^b are next folded inwardly, and then the flap 7^b is folded over upon the pasted or otherwise suitably secured to the flaps 8^a and 8^b. Thereafter, the flap 7^a is folded over and pasted or otherwise suitably secured to the flap 7^b.

The flaps 8^a and 8^b of the narrow sides of the carton are provided with slits 9^a and 9^b, respectively, extending inward an appropriate distance from their free edges to form tabs 10^a and 10^b, respectively, and where these slits terminate score lines 11^a and 11^b, respectively, are run, preferably diagonally from the terminations of the slits 9^a and 9^b to the edges of the flaps determined by the slits 2^a and 2^b. These score lines produce hinges upon which the tabs 10^a and 10^b may be swung.

It will be noted that the combined length of the flaps 8^a and 8^b is substantially equal to the length of the carton end. Thus, when these flaps are folded and secured, as described, their free edges are in substantial juxtaposition as indicated at 12 in Figs. 2, 4, 5 and 6, and their slits 9^a and 9^b form a continuous straight edge 13.

Flap 7^b which is folded down directly against the flaps 8^a and 8^b has a portion cut away at 14 in extent sufficient to clear the tabs 10^a and 10^b, and the flap 7^a which is folded upon and secured to the flap 7^b is provided with a portion 15 partially severed from the flap by means of slits 16, parts 16′ of the material of the flap between the ends of the slits 16 serving to hold the portion 15 normally in place pending opening of the carton.

In order that the portion 15 of the flap 7^a may not adhere to that part of the flaps 8^a and 8^b and the tabs 10^a and 10^b thereof cleared by the cut-away portion of the flap 7^b when all of the flaps are pasted together, the portion of the flaps 8^a and 8^b, and their tabs, thus exposed, may be printed or otherwise provided with adhesive-repellent material, and in furtherance of this

object the part 15 may be formed with lines of scoring 17 forming offstanding ridge means to prevent intimate contact of the inner surface of the part 15 with the underlying parts of the flaps 8a and 8b. Moreover, the means 17 will tend to guard against obliteration of underlying printed matter where such matter is employed.

With the pouring or dispensing end of the carton thus sealed, the carton may be filled with the material to be dispensed, and thereafter the other end flaps 8c, 8d, 7c and 7d may be folded into appropriate overlapping relation and pasted or otherwise appropriately sealed to complete the formation of the package.

When it is desired to obtain access to the contents of the package, the finger nail, or any appropriate instrument, may be inserted into one of the slits 16 and the partially severed portion 15 broken away from the flap 7a and bent back with the score line 1f acting as a hinge, as illustrated in Fig. 4. If it is desired to pour the contained material from the carton, the tabs 10a and 10b may either be pushed in or bent out upon their hinges 11a and 11b and the contents poured through the opening thus formed, the part 15, bent down as described, acting as a pouring lip. Moreover, when the tabs are bent out they will form, in combination with the portion 15, an effective pouring spout.

If it is desired to remove the contents by spoonfuls, a spoon may be pushed against the tabs 10a and 10b to force them inwardly, as illustrated in Fig. 5, or they may first be bent outwardly and the spoon inserted between them and into the opening. When the spoon is filled with material within the carton, it may be leveled as it is withdrawn by holding it upwardly against the straight edge 13 of the opening, as illustrated in Fig. 6. If the tabs 10a and 10b are pushed in, as illustrated in Fig. 5, when the spoon is inserted, they may follow the spoon out of the carton as it is withdrawn, by virtue of the resiliency of their hinges 11a and 11b, or they may be withdrawn by the spoon by its engagement with them, as illustrated in Fig. 6. In either case, they will tend, due to the resiliency of their hinges, to return automatically to their normal position, as illustrated in Figs. 2 and 4, to close the pouring or dispensing opening, thus excluding foreign substances from the carton and protecting the contents thereof against deterioration, or they may be manually returned to such position.

Furthermore, the frangible portion 15 may be returned to its initial position, substantially as illustrated in Fig. 3, although having been broken away from the flap 7a, thus providing an additional closure for the pouring or dispensing opening.

It will be noted that by arranging the score lines 11a and 11b, which form the hinges for the tabs 10a and 10b, diagonally, the shape of the pouring or dispensing opening conforms to some extent to the cross-sectional shape of a spoon, thus in a measure guarding against undesired spilling of the contents of the carton when a spoon is used. Moreover, the tabs 10a and 10b may function to scrape off surplus material from the edges of the spoon as the contents of the spoon are leveled off by the straight edge 13.

The provision of means whereby sticking of the partially severed portion 15 of the flap 7a to underlying portions of the adjacent flaps is prevented, makes the severing or breaking away of this portion 15 from the flap 7a easier, and the likelihood of its distortion remote.

Although the parts forming the dispensing or pouring opening have been described as located in the end structure of the carton, it will be apparent to those skilled in the art that they may be placed in other locations upon the carton, as desired, so long as the flaps necessary to their production are present.

Various changes and modifications are considered to be within the spirit of the invention and the scope of the following claims.

What we claim is:—

1. In a dispensing carton, a body having an end structure composed of a plurality of flaps folded into overlapping relation, two of said flaps having a combined length substantially equal to the length of said end and having their free ends in juxtaposition, each of said last-mentioned flaps slitted inwardly adjacent to its free end to provide a tab hingedly joined to its respective flap, the remaining flaps of said end structure having cut-away and frangible parts, respectively, whereby the said tabs may be exposed at the will of the user, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close.

2. In a dispensing carton, a body having an end structure composed of a plurality of flaps folded into overlapping relation, two of said flaps having a combined length substantially equal to the length of said end, each of said last-mentioned flaps provided with a straight slit adjacent to its free end to form a tab hingedly joined to its respective flap, the remaining flaps of said end structure having cut-away and frangible parts, respectively, whereby the said tabs may be exposed at the will of the user, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close and the straight edge formed in the end structure by the combined slits of said flaps providing a means for leveling the contents of a spoon inserted into and withdrawn from said carton through said dispensing opening.

3. In a dispensing carton, a body having an end structure composed of four flaps folded into overlapping relation and thus secured, two of said flaps having a combined length substantially equal to the length of said end, each of said last-mentioned flaps slitted adjacent to its free end to provide a tab hingedly joined to its respective flap, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close, the other two flaps overlying said slitted flaps and one of same having a severed portion and the other having a frangible portion of an extent sufficient to uncover said dispensing opening, whereby the carton may be opened to dispense its contents and may be closed thereafter as desired.

4. In a dispensing carton, a body comprising two broad sides and two narrow sides, each of said sides provided with an attached foldable flap, said flaps when folded into overlapping relation and thus secured providing an end structure for the carton, the flaps of said narrow sides being of a combined length sufficient to span the carton end and underlying the flaps of said broad sides, the flap of each of the narrow sides slitted inwardly from its free edge to provide a tab hingedly joined to its respective flap, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close, the flap of one of said broad sides cut away to clear said dispensing opening and secured to the flaps of said narrow sides, and the flap of the other broad side

overlying and secured to the first-mentioned broad side flap and forming the exterior of the carton end and provided with a frangible portion of an extent sufficient to uncover said dispensing opening.

5. In a dispensing carton, a body comprising two broad sides and two narrow sides, each of said sides provided with an attached foldable flap, said flaps when folded into overlapping relation and thus secured providing an end structure for the carton, the flaps of said narrow sides being of a combined length sufficient to span the carton end and underlying the flaps of said broad sides, the flap of each of the narrow sides slitted inwardly from its free edge to provide a tab hingedly joined to its respective flap, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close, the flap of one of said broad sides cut away to clear said dispensing opening and secured to the flaps of said narrow sides, and the flap of the other broad side overlying and secured to the first-mentioned broad side flap and forming the exterior of the carton end and provided with a frangible portion of an extent sufficient to uncover said dispensing opening, said frangible portion hingedly connected to its respective broad side and swingable into and out of overlying position with respect to said tabs.

6. In a dispensing carton, a body comprising two broad sides and two narrow sides, each of said sides provided with an attached foldable flap, said flaps when folded into overlapping relation and thus pasted providing an end structure for the carton, the flaps of said narrow sides being of a combined length sufficient to span the carton end and underlying the flaps of said broad sides, the flap of each of the narrow sides slitted inwardly from its free edge to provide a tab hingedly joined to its respective flap, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close, the flap of one of said broad sides cut away to clear said dispensing opening and pasted to the flaps of said narrow sides, and the flap of the other broad side overlying and pasted to the first-mentioned broad side flap and forming the exterior of the carton end and provided with a frangible portion of an extent sufficient to uncover said dispensing opening, said frangible portion provided with offstanding ridge means to aid in preventing its adhesion to said tabs when the end structure is pasted.

7. In a dispensing carton, a body comprising two broad sides and two narrow sides, each of said sides provided with an attached foldable flap, said flaps when folded into overlapping relation and thus secured providing an end structure for the carton, the flaps of said narrow sides being of a combined length sufficient to span the carton end and underlying the flaps of said broad sides, the flap of each of the narrow sides slitted inwardly from its free edge to provide a tab hingedly joined to its respective flap, said tabs swingable upon their hinge joints to provide a dispensing opening which they normally close, the flap of one of said broad sides cut away to clear said dispensing opening and secured to the flaps of said narrow sides, and the flap of the other broad side overlying and secured to the first-mentioned broad side flap and forming the exterior of the carton end and provided with a partially severed frangible portion of an extent sufficient to uncover said dispensing opening.

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