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1,816,835

CARTON AND CARTON OPENER

Filed Aug. 18, 1930

FIG. 1.

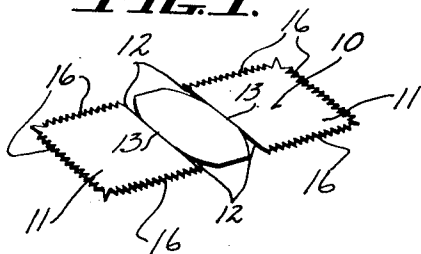


FIG. 2.

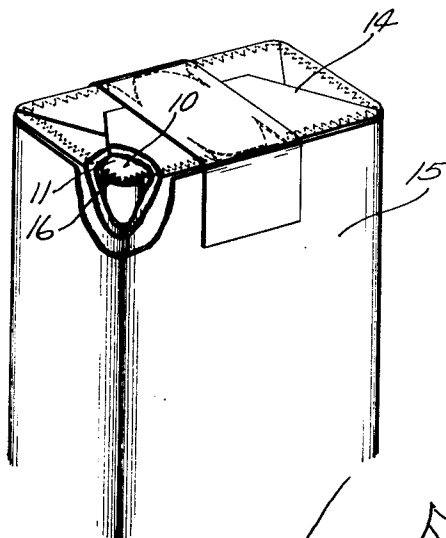


FIG. 3.

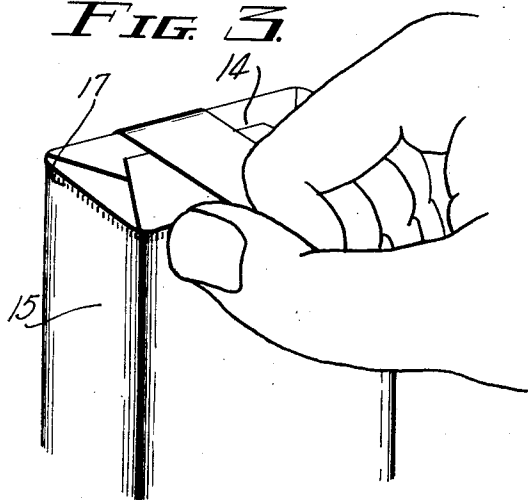


FIG. 5.

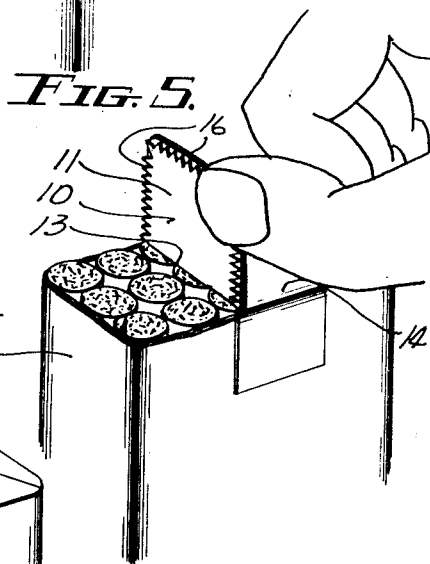
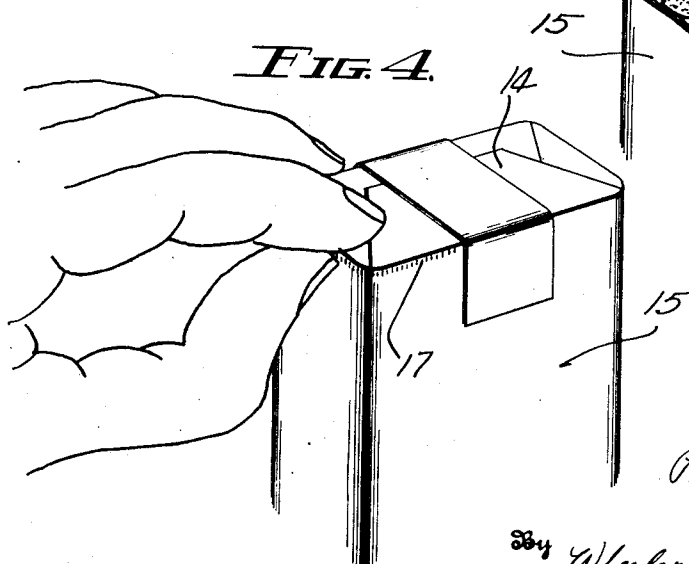


FIG. 4.



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CARTON AND CARTON OPENER

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This invention relates to improvements in cartons and carton openers.

It is the primary object of the invention to provide novel and improved means to be incorporated in a carton for manipulation, while concealed therein, to facilitate the opening of the carton or a portion thereof.

More specifically stated, I propose to incorporate within the carton at the time of manufacture thereof a stiff sheet of material having a serrated margin substantially coinciding with the margin of the carton wall in which the material is incorporated, such material being provided with a line of weakness upon which it will bend or break to facilitate manipulation of the portion beyond said line in cutting and tearing the corresponding portion of the carton wall to expose its contents.

In the drawings:

Figure 1 is a view in perspective of the carton opener as it appears separately.

Figure 2 is a perspective view of the top of the carton, wall portions of which are broken away to expose the carton opener therewithin.

Figure 3 is a view similar to Figure 2, showing the use of the operator's thumb nail in perforating the carton wall by forcing it onto the point of the serrated margin of the opening device.

Figure 4 is a similar view illustrating the use of the operator's thumb nail to engage the opener for the purpose of lifting it and using it to tear the material of the carton along the lines of perforations made as shown in Figure 3.

Figure 5 is a further view similar to Figures 2, 3 and 4 and showing how the opening device is bent or broken to fold upwardly, carrying with it the severed portions of the carton to leave a neat rectangular opening.

Like parts are identified by the same reference characters throughout the several views.

The carton opening device per se comprises a strip 10 of very thin stiff sheet material such as celluloid, thin, plated, sheet iron or any other metal or composition substance having the required characteristics as hereinafter set forth.

Where the opening device is to be used for a preliminary perforation of the carton, as shown in Figure 3, the margin of strip 10 is preferably serrated throughout the sides and ends of its terminal sections 11 to provide relatively sharp stiff teeth sufficiently pointed and strong to penetrate readily through the carton wall under pressure. Where the carton is so light as to make these teeth unnecessary or where the line of breakage of the carton wall is otherwise defined, the teeth may be omitted.

In order to demarcate the opening to be formed in the carton by the opening member 10, it is preferred to designate on the opening member, in spaced relation to each of its ends, a transverse line of breaking or bending. This may be done by the provision of deep notches at 12 in the sides of the strip or by the provision of score lines 13, or by both of these expedients used together as shown in Figure 1.

It is particularly to be noted that the plate 10 corresponds identically in size with the interior area of the end wall 14 of the carton 15 in which it is incorporated. This fact makes it unnecessary to use any special pains in positioning or retaining the opener within the carton and greatly facilitates its incorporation therein. Additionally, the exact registry of sheet 10 with the end wall of the carton is found to facilitate the opening of the carton since the margins of sheet 10 will correspond with the margins of the carton wall, these being the lines upon which the wall may most easily be sheared or torn to provide the desired opening. The fact that the two ends 11 of the opening device are identical makes it unnecessary to designate either end of the carton wall as the place of opening. Each end is opened identically the same as the other.

In opening the carton, it is preferred, where the opener with a serrated margin is used, to pass the thumb nail or some other like object about the margin of the wall to be opened, thereby forcing such wall with considerable pressure against the teeth 16. As a result of this operation the carton wall will be perforated in the manner shown at

17 in Figure 3. Whether or not this preliminary perforating operation is performed it is readily possible to open the carton by using the thumb nail to engage beneath the end of strip 10. The wall of the carton will readily yield sufficiently to enable the end of the strip to be so engaged. The end 11 of strip 10 is then turned upwardly, as shown in Figure 5, to leave a neat opening of rectangular outline through which the contents of the carton are readily accessible.

If the material of the strip is celluloid or the like, it will break between notches 12 or along score line 13 at the point of weakness provided. If the material of strip 10 is metal, the metal will bend upwardly to the position shown and will ordinarily not break. It is preferred to use material which breaks off when the carton is opened since the flexible flap torn from the carton wall is ordinarily sufficient to re-cover the opening in the carton and it is usually preferred to get rid of the relatively stiff strip used in the opening operation. If such strip is made severable it may also be made to carry advertising which will come conspicuously to the attention of the operator as he removes the strip.

It would be difficult and expensive to position the opening strip with sufficient rigidity to enable its performance of the function illustrated in Figure 3 if it were not for the fact that the strip fits exactly into the end of the carton and is rigidly positioned thereby to resist any pressure placed upon it during the opening operation.

The device herein disclosed is not only inexpensive and convenient but it is wholly invisible when incorporated in the carton prior to use and will also be invisible subsequent to use if the opener is made of frangible material as above suggested. Also it makes a neater opening than any other devices with which I am familiar.

I claim:

1. A carton opener comprising a sheet of frangible material corresponding in over-all dimensions to the carton wall to be opened and provided with means defining a transverse line of frangibility upon which the end of said sheet may be broken off when lifted slightly, so as to provide a quick snap action to the broken end and facilitate the opening of an overlying carton wall.

2. A carton opener comprising a celluloid strip provided with means establishing a transverse line upon which said strip is easily frangible upon a slight upward movement of its end, said strip being adapted to be incorporated beneath the end wall of a carton to facilitate the opening of a portion of said wall upon the manual deflection and breakage of the end of the strip.

3. A carton having walls of material easily torn, and an internal strip of breakable ma-

terial conforming in general outline to one such wall and provided with means establishing a transverse line upon which the end of said strip is adapted to break off when slightly bent in a carton opening direction.

4. An opening device adapted to be incorporated beneath the end of a carton and comprising a strip of frangible material easily breakable upon a transverse line and having its side margins notched to assist in defining said line, the end portion of said strip being adapted to tear open registering portions of the carton wall when released by breakage from the remainder of the strip.

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