Dec. 15, 1931. E. H. DRYER 1,836,228

CARTON OPENER

Filed July 7, 1930

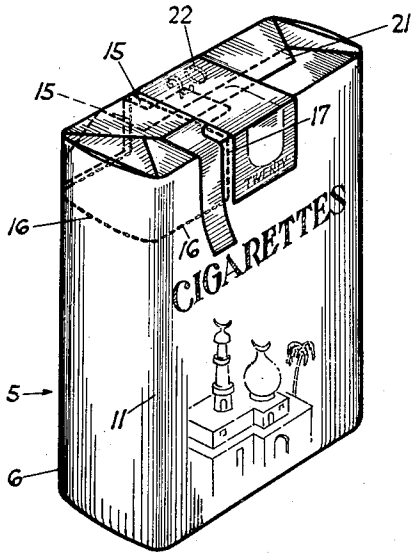

FIG. 1

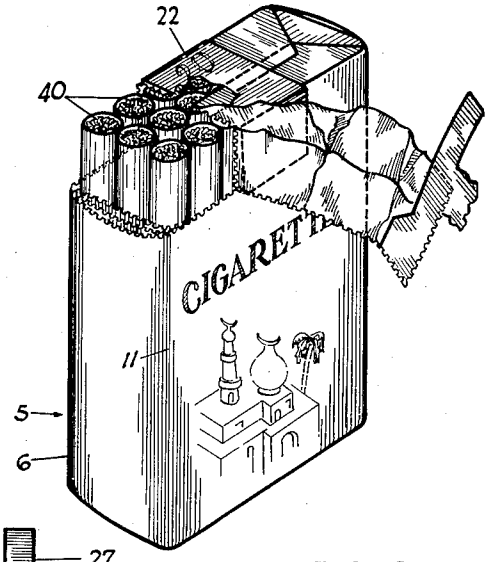

FIG. 2

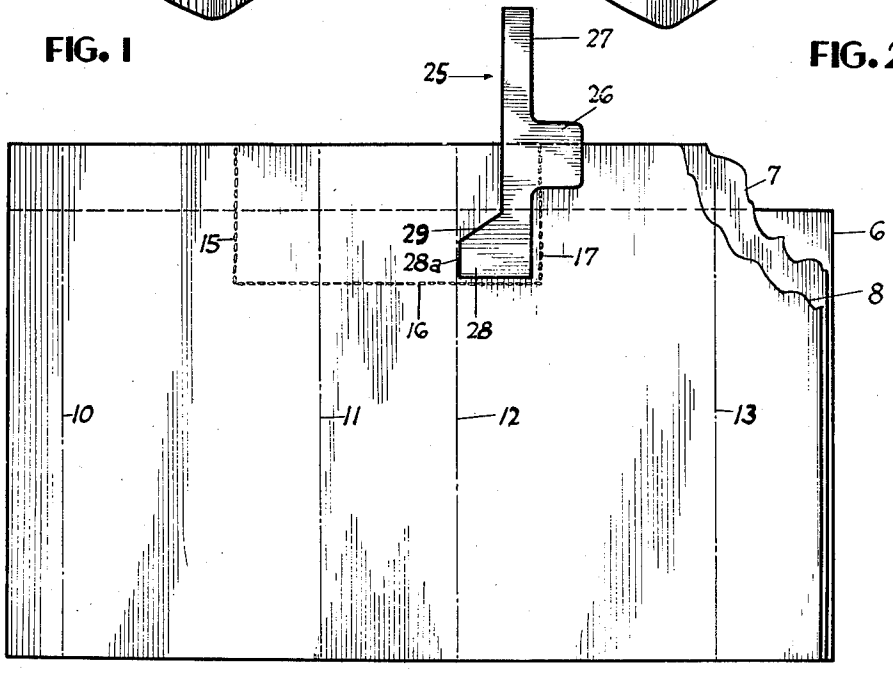

FIG. 3

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CARTON OPENER

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This invention relates to carton opening means applicable to cartons so constructed that the portion of the carton to be opened up in order to render its contents accessible may have a definite part thereof torn away to make an opening of the desired size and shape.

Another object of the invention is to provide an improved manually operable tearing element which may not only be operated to open the carton, but which is also furnished with improved means for rupturing a seal or revenue stamp when the device is applied to a carton or package having a seal or revenue stamp thereon.

A further object is to provide a tearing element that directs the tearing force in an improved manner to the area to be torn away so that that portion of the carton wall, and that portion only, is removed by the tearing operation.

Other objects, advantages and features of invention, may hereinafter appear.

Referring to the accompanying drawings, which illustrate what is at present deemed to be a preferred embodiment of the invention:

Figure 1 is a perspective view of a carton embodying the invention, showing said carton in the unopened condition.

Figure 2 is a perspective view of said carton showing the same after having been opened.

Figure 3 is a view showing in extended form the three layers of tissue of which the walls of the carton or container are composed, the inside layer being uppermost in the view.

Referring in detail to the drawings, the invention is illustrated by way of example, as applied to a cigarette carton 5, composed of paper laminæ having an outer layer 6 of relatively heavy paper, a middle layer 7, preferably of tinfoil or like tissue impervious to moisture, and an inside layer 8 of relatively thin paper.

These three layers which ordinarily compose the package may be cohered together in the usual manner, or the laminæ may be gummed or otherwise cohered along the line of cleavage. In Fig. 3 the dot-and-dash lines 10, 11, 12 and 13 designate the lines of flexure, and 15, 16 and 17 designate the perforations of the line which separates the area to be torn away from the remainder of the package to form the desired opening.

At the end of the package to be opened the two inner layers 7 and 8 are overlapped at 21 in the usual manner, the revenue stamp 22 constituting a fragile seal which extends across the top of the package and a short distance down each side thereof.

The tearing element 25, to which the invention more particularly pertains, consists of a strip of tenacious material, such as cloth or relatively heavy paper which has, preferably at about its mid-length, a lateral extension 26 which underlies the seal 22 when the package is in the sealed condition, and a manually accessible tongue portion 27 at one end thereof. The end portion of the element 25 which is opposite to said tongue 27 is provided with an offset portion or lateral extension 28 which is directed oppositely to the extension 26. Said extension 28 is desirably located at the extreme end of the strip of which it forms a part, and it has a beveled edge portion 29 to strengthen its union with the body portion of strip 25.

As has already been stated, at the end of the container which is designed to be opened, the three-ply wrapper thereof has overlapping end portions made from its two inner layers across which the seal 22 extends. The outer layer 6 terminates at the upper side edge of the package being cut to the proper width for this purpose, as shown in Fig. 3.

The extension 26 of the tearing strip not only underlies said seal but also underlies one of said overlapping wrapper ends, said extension overlying the other end of the wrapper. The body portion of the tearing strip is slightly spaced away from the seal and along this space the three layers of the wrapper are weakened by means of the perforations 15, 16 and 17.

The tearing strip 25 is adhered to the inner surface of the inside wrapper layer 8 in such a position that the inner end of said strip is located close to the perforated line 16, the

edge 28a of the strip lying along the flexure line 12 and its diagonal edge 29 being positioned to strengthen the corner portion of the folded package in such a manner as to direct properly the line of cleavage at the corner of the package where the turn thereof takes place.

The offset portion or lateral extension 28 of the tearing element 25 being provided with the diagonal cut as indicated at 29 forms in conjunction with a side edge of the tearing strip an obtuse angle, as shown in Fig. 1. This enables the corner of the package to be folded without any portion of the tearing element entering into the fold at that point.

By referring to Figure 3 it will then be observed, that the only bend occurring in the tearing strip will be along the dotted line of the layer 6 which is the outside top edge of the package and causing at that point the fold in the tearing strip to take place at its narrow-most point.

This character of fold makes the forming of the package simpler and neater.

In the drawings the package is shown containing cigarettes 40, the overlapping ends of the wrapper being sealed down by means of a revenue stamp, but it is to be understood that the invention may be applied to a great variety of containers used for various other purposes.

To open the package it is only necessary to grasp the tearing strip by its tongue portion 27 and apply sufficient traction thereto first to break away a portion of the seal 22 and then tear away the corner portion of the wrapper along the perforated line made up by the perforations 15, 16 and 17, thus exposing a portion of the contents as shown in Fig. 2.

Claims:

1. In a carton opener, a container having a fragile closure portion, a fragile seal, and a tearing strip provided with a body portion and a lateral extension between its ends which underlies said seal to rupture the latter when said strip is operated to open the carton, there being a row of perforations through the wall of the container between said seal and the body portion of said tearing strip.

2. In a carton opener, a container having a wrapper with overlapping ends, a seal adhered to said wrapper and extending across said overlapping ends, and a tearing strip adhered to said wrapper adjacent to said seal, said tearing strip overlying one and underlying the other of said overlapping ends and having a lateral extension which underlies said seal to rupture it when traction is applied to said tearing strip to open the container.

3. In a carton opener, a container having a wrapper with overlapping ends, a seal adhered to said wrapper and extending across said overlapping ends, and a tearing strip adhered to said wrapper adjacent to said seal, said tearing strip overlying one and underlying the other of said overlapping ends and having a body portion and a lateral extension which underlies said seal to rupture it when traction is applied to said tearing strip to open the container, there being a row of perforations through the overlapping end portions of said wrapper between said seal and the body portion of said wrapper.

4. In a carton opener, a container having a wrapper with overlapping ends, a seal adhered to said wrapper and extending across said overlapping ends, and a tearing strip attached to said wrapper adjacent to said seal, said tearing strip, having a lateral extension which underlies said seal and one of said overlapping ends and which overlies the other of said overlapping ends, there being a space between said seal and the body portion of said tearing strip, the wrapper being weakened along a line to be torn which is located between said seal and the body portion of said tearing strip.

5. A package having therearound a wrapper having overlapping end portions at an end of the package and at such end a corner area bordered by a perforated line which extends through substantially a right angle in the folded package, and a tearing strip which at one end is free from the package and at its other end is adhered thereto and has an enlargement which is located within and adjacent to the angle of said perforated line.

6. A package having therearound a wrapper having overlapping end portions at an end of the package and at such end a corner area bordered by a perforated line which extends through substantially a right angle in the folded package, and a tearing strip which at one end is free from the package and at its other end is adhered thereto and has an enlargement which is located within and adjacent to the angle of said perforated line, whereby to direct properly the line of cleavage where the turn thereof takes place at the corner of the package.

7. A package having therearound a wrapper having overlapping end portions at an end of the package and at such end a corner area bordered by a perforated line which extends through substantially a right angle in the folded package, and a tearing strip which at one end is free from the package and at its other end is adhered thereto and has an enlargement which is located within and adjacent to the angle of said perforated line, said enlargement having a beveled edge portion which forms in conjunction with a side edge of said tearing strip an obtuse angle substantially as desired.

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