March 30, 1937. E. MacG. RICE 2,075,136

OPENING DEVICE FOR PACKAGES

Filed April 18, 1935

Fig. 7.

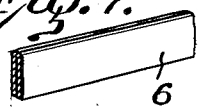


Fig. 1.

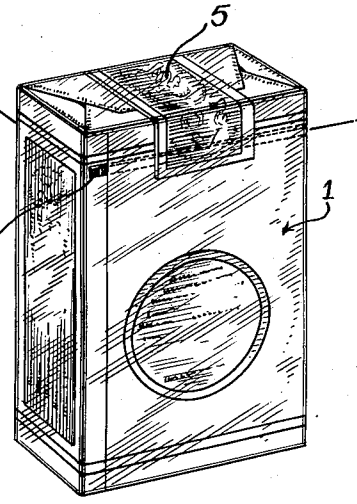


Fig. 10.



Fig. 11.

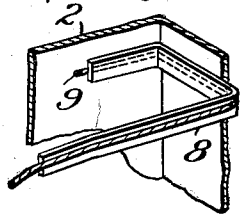


Fig. 8.

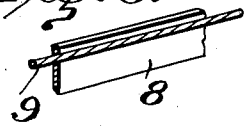


Fig. 9.

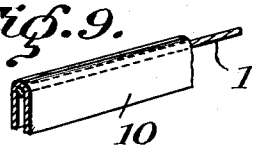


Fig. 2.

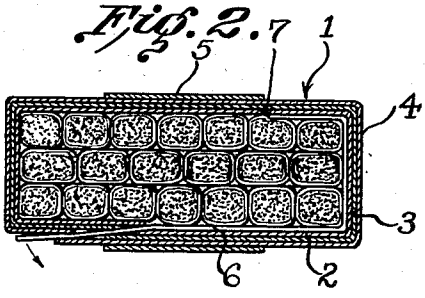


Fig. 3.

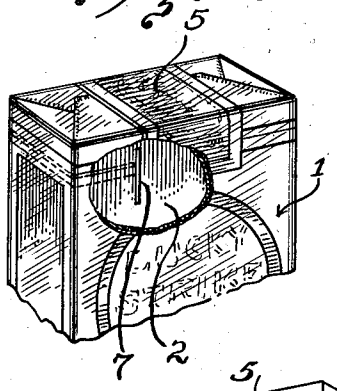


Fig. 4.

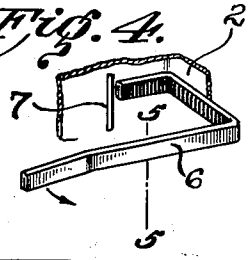
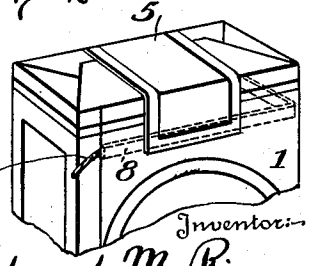


Fig. 5.



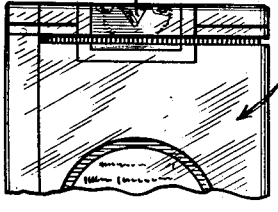


Fig. 6.

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OPENING DEVICE FOR PACKAGES

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Application April 18, 1935, Serial No. 17,105

6 Claims. (Cl. 229—51)

My invention relates to an opening device for packages, and has particular reference to a means associated with or incorporated in a package whereby a portion of the package may be ripped or torn to permit ready access to the contents of the package. While primarily intended for use in connection with cigarette dispensing packages to effect the tearing and opening of a corner portion of such packages, the invention is not restricted to this specific use but will find utility in connection with receptacles, containers, packages and wrappers of other types.

It is an object of my invention to provide an opening device for packages, comprising a ripping device in the form of a strip, tape, string or a combined tape and string, to be secured to the inner face of the package, or to the inner face of the innermost wrapper of said package, and having an outer, free end which can be grasped by the user and manipulated to tear through the package walls to make available the contents of the package.

It is an object of my invention to associate with a package, a relatively strong ripping device in the form of a strip, tape, string or a combined tape and string, having a portion adhesively secured to the inner face of the package or to the inner face of the innermost wrapper thereof, and having a free end extending through the normal seam or seams of the package or wrapper to the exterior thereof, and so arranged as not to interfere with the complete sealing of the contents of the package.

It is an object of my invention to provide a ripping device in the form of a strip, tape, string, or a combined tape and string, adapted for use with packages, such as cigarette packages or the like, which ripping device is relatively strong and may be grasped and manipulated to tear through or rip a portion of the walls of the package to make available the contents of the package, and to associate with the ripping device a means for limiting the extent of the tearing or ripping action thereof.

It is a further object of my invention to provide a ripping device comprising a combined string and tape or strip, which ripping device will embody all the efficient cutting action of a string and, because of the combination of the string with a tape or strip, will enable the combined ripping device to be readily associated with or incorporated in the package during the manufacture of said package.

It is a further object of my invention to provide an opening device of the above mentioned character in which the ripping device can be readily associated with the conventional or standard package without requiring a material modification of such package structure, and which will not interfere with the use of the standard packaging machinery usually employed to form, fill and close such packages.

It is a still further object of my invention to provide an opening device admirably suited for use in connection with the present conventional or standard package of cigarettes, say the usual package of "twenties", so that such package may be readily opened by simply one continuous pull on the opening device, which opening device is so arranged and designed that it will cut through all the wrappers of the package at a desired location in the package, and in such a manner that at the conclusion of the predetermined cut, the opening device will pull itself free from the package, leaving the package with an appropriate opening for the removal of cigarettes, yet permitting the wrapper to function to protect the greater portion of the sides of the cigarettes and the ends thereof, after the opening of the package.

It is a still further object of my invention to provide an opening device of the above mentioned character which is simple in construction, cheap and easy to manufacture, and highly efficient in the purposes for which designed.

In the accompanying drawing forming a part of this specification and wherein, for the purpose of illustration, I have shown several preferred embodiments of my invention as applied to cigarette packages or the like.

Figure 1 is a perspective view of a standard or conventional cigarette package showing one form of my improved ripping device incorporated therein;

Figure 2 is a transverse sectional view on the line 2—2 of Figure 1;

Figure 3 is a fragmentary perspective view, partly in section, illustrating a means for limiting the tearing or ripping action of the ripping device;

Figure 4 is a fragmentary perspective view, partly in section, showing one form of my improved ripping device and a portion of the innermost wrapper of the package;

Figure 5 is a fragmentary perspective view illustrating a package provided with a ripping device of the combined string and tape or strip type;

Figure 6 is a fragmentary side elevation of the upper portion of a package from which any of

the several forms of my improved ripping device has been removed;

Figures 7, 8, 9 and 10 are enlarged fragmentary perspective views of several preferred embodiments of my ripping device, Fig. 7 showing a tape or strip of paper or other material doubled upon itself to provide for increasing strength, and Figures 8, 9 and 10 showing several preferred forms of my combined string and tape or strip type of ripping device; and

Figure 11 is a fragmentary perspective view similar to Fig. 4, and partly in section, showing the combined string and tape or strip type ripping device associated with a portion of the innermost wrapper of the package.

Referring to the drawing, wherein like reference numerals are employed to designate like parts throughout the several views, the numeral 1 designates broadly a package containing, say, twenty cigarettes, this package corresponding substantially in its form and construction to the standard package usually employed in the distribution and sale of various popular brands of cigarettes, and comprising an inner wrapper 2, usually formed from paper-lined tin-foil or the like; an intermediate wrapper 3, usually formed from a good grade of paper and having printed or otherwise applied thereon an ornamental label, trade-mark, or other data to designate the brand of cigarettes, the manufacturer's name, etc., and an outer wrapper 4, usually formed from transparent, moisture-proof, sheet material, such as "Cellophane" or the like.

The innermost wrapper 2, the intermediate wrapper 3 and the outermost wrapper 4 are assembled and formed into a tube, generally rectangular in cross section and of a length in excess of the length of the average cigarette. The longitudinal edges of each of the wrappers overlie each other and are attached by means of glue or other suitable adhesive, these seams usually being disposed along the rear wall of the package. After the cigarettes are placed within the preformed tube, or, in accordance with another packaging method, after the wrappers are wrapped about the cigarettes and their overlapping longitudinal edges secured together, the extending end portion of the wrappers are folded inwardly, as clearly shown in Figures 1, 3 and 5 of the accompanying drawing, and the overlapping portions suitably sealed in position, the top portion of the intermediate wrapper 3 usually being provided with a United States internal revenue stamp 5 which is applied across the top of the package and extends a short distance down the front and rear walls thereof. Any desired or preferred methods or machines can be employed for making the package, for inserting the cigarettes therein, and for closing and sealing the package, and such methods and machines and the resulting package per se are old and well known in the art and form no part of my present invention. Regardless of the methods and machines employed to make, fill and close the package, the package usually comprises inner, intermediate and outer wrappers forming a package having spaced front and rear, top and bottom and side walls, with the longitudinal seams of the several wrappers arranged closely adjacent and all extending along one wall of the package, usually along the rear wall thereof.

The important feature of my present invention resides in the provision of a ripping device to be associated with a package of the general type referred to above, in such a manner that the outer, free end of the ripping device may be grasped by the user and manipulated to rip or tear through a portion of the rear, end and/or front walls of the package adjacent the top thereof, to permit a portion of the top of the package to be bent back or completely removed from the package, thus providing ready access to the cigarettes therein.

In the form of my invention illustrated in Figs. 1, 2, 3, 4 and 7, the ripping device 6 may be made from a strip of relatively strong paper, cloth, or other material sufficiently strong and stiff for the purpose, it having been found that "Cellophane" is admirably suited as a material for making this form of ripping device. The strip or tape form of ripping device 6 may be of a single thickness or may be double, triple or otherwise folded to increase the thickness and, consequently, the strength of the strip, and to provide a more efficient and stronger cutting edge or edges, i. e., the strip may be doubled as shown in Figures 4 and 7, or it may be triple or zig-zag folded; may be doubled with the meeting edges positioned longitudinally of the center of the strip, etc.

The ripping device 6 has one of its side faces adhesively secured to the inner face of the innermost wrapper 2 and near the top of the package and extends from a point on the front wall of the package near the corner thereof, then across one side wall, then along the rear wall, and then out between the seams of the several wrappers, and terminates in a free end portion adapted to be grasped by the user when it is desired to open the package, the exact positioning of the strip being readily apparent upon an examination of Figures 2 and 4 of the accompanying drawing. The ripping device 6 is secured to the inner face of the innermost wrapper 2 by means of glue, hot wax or other suitable means. The inner wrapper 2 may be provided adjacent the inner end of the ripping device 6 with a slit 7 which passes completely through the said inner wrapper, or through all of the inner and outer wrappers. While I have illustrated a slit 7 which extends through one or more of the wrappers, it is to be understood that I may employ a row or rows of perforations, or otherwise weaken, as by scoring, the wrapper or wrappers adjacent the inner end of the ripping device 6.

Referring now to the operation of that form of my improved ripping device above described, it is to be noted that by grasping the free end of the ripping device 6 and pulling upon the same, the said strip or tape will completely sever the outer transparent wrapper 4; the intermediate wrapper 3 and the revenue stamp thereon; and the innermost wrapper 2; removing from the said wrappers and stamp strips of material corresponding substantially to the width of the said ripping device 6. This ripping or severing action continues along a portion of the rear wall of the package, across the said side wall and along a portion of the front wall of the package, and is limited or arrested upon reaching the slit or other weakened portion 7, i. e., just as soon as the ripping or severing action of the ripping device 6 reaches the slit or other weakened portion 7, the said ripping device 6 tears free from the package. After the wall portions have been cut or severed as above described and as partly shown in Figure 6, that portion of the top of the package above the severed portion may be bent back or, if desired, may be torn off completely, to expose the cigarettes and to permit their ready removal from

the package. It is important to note at this point that the only required change or modification in the standard or conventional cigarette package, consists in the affixing of the ripping device 6 to the inner face of the wrapper 2 and the formation of the slit, perforations or other weakened portion 7; all of which operations can be readily performed during the course of manufacture of the inner wrapper 2 and by the addition of strip-feeding, strip-pasting and wrapper-punching, perforating or scoring devices, to the standard package forming machinery, and by the adjustment of such machinery so as to bring the folds of the wrapper or wrappers into proper positions. Since the slit or other weakened portion 7 is relatively small and preferably extends only through the inner wrapper 2, and since the ripping device 6 passes outwardly through the seams of the several wrappers constituting the package, it will be apparent that the provision of the ripping device 6 and the slit or other weakened portion 7, does not interfere with the complete sealing and protective function of the wrappers. If desired, the ripping device may extend through the seams of the inner wrappers only, and not through the seam of the outermost sealing wrapper 4 as it is a practice among some smokers to completely remove the outer or sealing wrapper entirely before attempting to remove the cigarettes from the package. It will be further apparent that the slit or otherwise weakened portion 7 performs an important function in the package opening operation, in that it limits or arrests the ripping or severing action of the ripping device 6; definitely establishes a point beyond which the ripping or severing action will not extend; and permits the complete detachment of the strip or tape from the package after said strip or tape has performed its function. It will be further apparent that the ripping device 6 can be strengthened by being double, triple or otherwise folded and that because of such folding, a smooth and relatively sharp edge or edges may be formed which will readily cut or rip through the material of the several wrappers constituting the package.

In the form of my invention illustrated in Figs. 5, 8, 9, 10 and 11, I have shown a ripping device comprising a combined string and tape or strip. It is generally recognized that a string, cord, or the like, constitutes an effective and efficient ripping or cutting means, but it is not practical to associate such a ripping or cutting means with, or to incorporate the same in, a package such as a package of the type disclosed in the present application, due to the difficulties of feeding, inserting, or otherwise handling a flexible string or cord in substantially standard package forming machinery. By providing a combined string and tape or strip ripping device, I utilize all the advantages of the efficient ripping or cutting action of a string, and overcome the disadvantages inherent in the assembly of a string or cord with a package, i. e., because of the tape or strip-like form of my combined string and tape or strip-type ripping device, the same may be readily associated with or incorporated in a package.

In Figures 8, 9 and 10 of the accompanying drawing I have shown several forms of my combined string and tape or strip-type ripping device, the form of my invention shown in Figure 8 comprising a flat strip 8 of relatively strong paper, cloth, or other material sufficiently strong and stiff for the purpose, which strip 8 may be of single thickness or may be double, triple or otherwise folded to increase the thickness and strength of the tape or strip. On one face of the tape or strip 8 I secure by means of adhesive or other suitable fastening means, a string, cord or the like 9, thus producing a combined string and tape or strip type ripping device. The form of my invention shown in Fig. 9 consists of a tape or strip of paper, cloth or other suitable material 10 folded upon itself and containing within the fold thereof a string, cord, or the like 11, the string or cord 11 being secured within the fold by means of adhesive or other suitable fastening means. Or, if desired, the abutting inner faces of the folded tape or strip 10 may be secured together by adhesive or other suitable fastening means to thus retain the string or cord 11 within the fold. The form of my invention shown in Fig. 10 consists of a combined string and tape or strip-type ripping device comprising a tape or strip 12 having a cord or string 13 incorporated therein, the cord or string 13 being incorporated within the strip during the process of forming the strip 12. The diameter of the string 13 and the thickness of the tape or strip 12 are substantially the same.

It is believed that the operation of the several forms of ripping device shown in Figs. 5, 8, 9, 10 and 13 will be readily apparent after a reading of the operation of the form of my invention shown in Figs. 1, 2, 3, 4 and 7. Suffice it to say that any of the forms of combined string and tape or strip-type ripping devices may be secured to the inner face of the innermost wrapper 2 of the package, to occupy a position corresponding to the position assumed by the ripping device 6 above referred to, with the outer end of the string or cord extending through the seams and terminating in the outer face of the package. The combined string and tape or strip-type ripping device may be used in a package having a slit or otherwise weakened portion 7, in which event the slit or weakened portion 7 will function in the manner above described in connection with the ripping device 6. Or, if desired, the slit or weakened portion 7 may be entirely omitted and only a portion of the side surface of the combined string and tape or strip-type ripping device attached or secured to the inner face of the innermost wrapper, i. e., instead of attaching the entire surface of the combined string and tape or strip-type ripping device to the inner face of the wrapper, only the lower portion thereof below the string is attached, and when so attached the strip will function only as a carrier strip for the string, the string itself having no permanent connection with the inner face of the wrapper, and, hence, when the outer end of the string is grasped and pulled by the operator, the string will cut through or break away from its tape or strip and will cut through the package walls, the carrying strip having no function whatever in the cutting or ripping action. It will be readily seen that the string or cord, upon reaching the inner end of the carrier tape or strip, will cease to cut any further and will be readily detached from the package.

In the accompanying drawing and in the above description I have set forth my invention as applied to a standard multi-wrapper package, but it is to be understood that the invention is not limited to a package of this particular character, and that the rip strip or tape opening device can be used with a single ply package or wrapper, in which event the ripping device would be applied

directly to the inner face of the package or wrapper with the free end of the ripping device extending between the seam of the package. While I have described several forms of my improved ripping device used in connection with a slit or weakened portion which limits the tearing or ripping action of the ripping device, it is obvious that while such a construction is quite desirable, the slit or weakened portion can be omitted and the ripping device will perform its stated function.

It is to be further understood that the forms of my invention herein shown and described are to be taken as preferred embodiments of the same, and that various changes in the shape, size, material and construction of parts may be made without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A package comprising a wrapper folded to provide opposed walls with the free edges of said wrapper secured together to form a seam in one wall, a ripping device for said wrapper having one end projecting through the seam to the exterior of the package and having its remaining portion secured to the inner face of the wrapper and terminating at a point on the wall opposite the seamed wall, and means on the wall opposite the seamed wall for limiting the tearing or ripping action of said ripping device.

2. A package comprising a wrapper folded to provide front, rear and side walls with the free edges of said wrapper secured together to form a seam in the rear wall, a ripping device for said wrapper having one end projecting through the seam in the rear wall to the exterior of the package and having the remaining portion secured to the inner face of a portion of the rear wall, to the inner face of one side wall, and to a portion of the inner face of the front wall of the wrapper, and means on said front wall adjacent the end of the ripping device for limiting the tearing or ripping action of said ripping device.

3. A package comprising a wrapper, and a ripping device for said wrapper having one end projecting through the wrapper to the exterior of the package and having its remaining portion secured to the inner face of said wrapper, said wrapper having a weakened portion adjacent the inner end of the ripping device, said weakened portion limiting the tearing or ripping action of said ripping device and permitting separation of said ripping device from said wrapper at the completion of the tearing or ripping operation.

4. A package comprising a wrapper folded to provide front and rear walls, and a ripping device for said wrapper having one end projecting through the rear wall of the wrapper to the exterior of the package and having its remaining portion secured to the inner face of a portion of the front wall, said front wall having a weakened portion adjacent the inner end of the ripping device, said weakened portion limiting the tearing or ripping action of said ripping device and permitting separation of said ripping device from said front wall at the completion of the tearing or ripping operation.

5. A package comprising a wrapper folded to provide front, rear and side walls with the free edges of said wrapper secured together to form a seam in the rear wall, and a ripping device for said wrapper having one end projecting through the seam in the rear wall to the exterior of the package and having its remaining portion secured to the inner face of a portion of the rear wall, to the inner face of one side wall and to a portion of the inner face of the front wall of the wrapper, the front wall of said wrapper having a slit cut through the wrapper adjacent the inner end of the ripping device, said slit limiting the tearing or ripping action of said ripping device and permitting separation of said ripping device from said front wall at the completion of the tearing or ripping operation.

6. A package comprising a plurality of wrappers folded to provide opposed walls with the free edges of each of said wrappers secured together to form seams in one wall, and a ripping device for said wrappers having one end projecting through the seams to the exterior of the outermost wrapper and having its remaining portion secured to the inner face of the innermost wrapper and terminating at a point on the wall opposite the seamed wall, the wrapper to which said ripping device is secured having a weakened portion adjacent the inner end of the ripping device to limit the tearing or ripping action of said ripping device and to permit separation of said ripping device from said wrapper at the completion of the tearing or ripping action.

EDWARD MacGIFFERT RICE.