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J. C. KINKER, JR

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TEAR STRIP FOR DISPENSING PACKAGE

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FIG. 2.

FIG. 1.

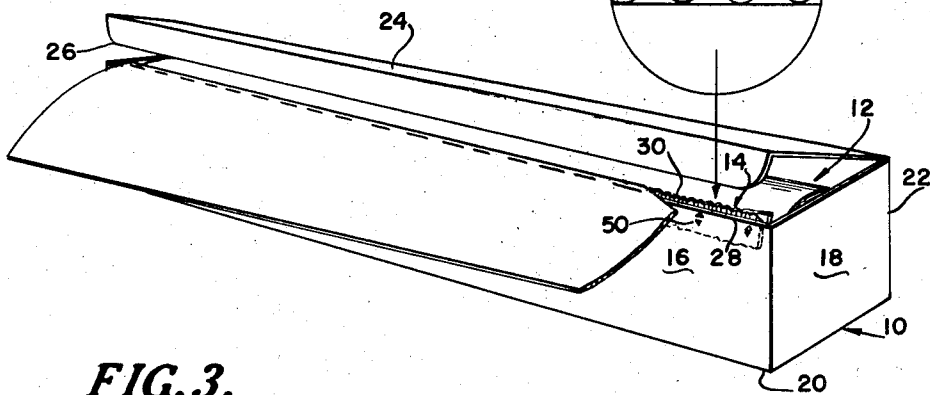


FIG. 3.

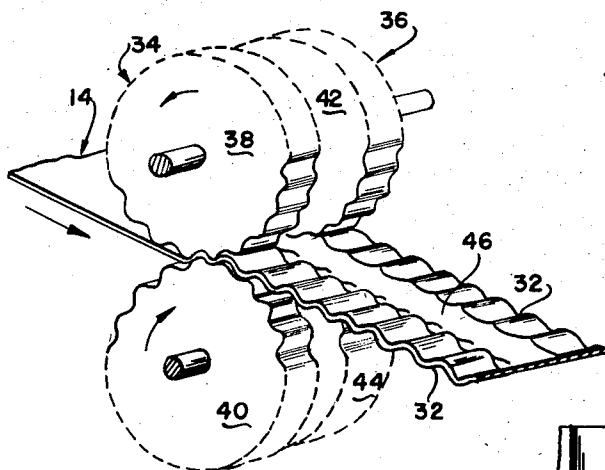


FIG. 5.

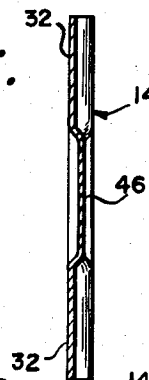


FIG. 6.

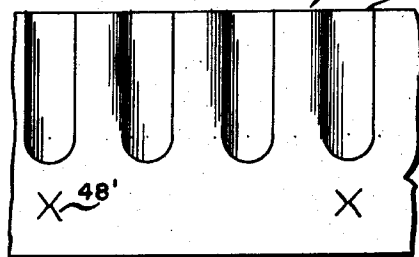
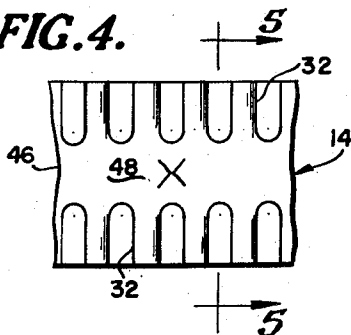


FIG. 4.



INVENTOR

JOHN C. KINKER, JR.

BY *Cushman, Darby & Cushman*  
ATTORNEYS

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## TEAR STRIP FOR DISPENSING PACKAGE

John C. Kinker, Jr., Richmond, Va., assignor to Apex Machine Manufacturing Company, Incorporated, Richmond, Va., a corporation of Virginia

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3 Claims. (Cl. 225—39)

The present invention relates to a dispensing package for sheet material and, more particularly, to a box-like receptacle for use in dispensing sheet material from a roll by withdrawing the sheet material to a desired length and then severing it from the roll.

Sheet material, such as aluminum foil, wax paper, and various wraps or the like, is manufactured in roll form and packaged in portable box-like receptacles having a metal tear or cutting strip provided on one wall of the box so as the sheet material is unrolled from the roll it may be cut into desired lengths. Heretofore the metal cutting strip has been provided with sharp serrated edges to define the cutting surface. The serrated edges of the tear strips of portable types of dispensing packages have oftentimes caused injury to the user in that when the package is handled, the hands often come into contact with, and are cut by, the serrated edges of the tear strip. Further, dispensing packages having serrated edges on the tear strip cause damage to the sheet material by tearing or scratching the same as it is being withdrawn from the roll within the receptacle across the tear strip.

An object of the present invention is to provide a dispensing package having an improved tear strip, the tear strip being so constructed as to have no sharp projections or serrations thereon to cause injury to the user of the package or damage to the sheet material being dispensed, but yet having a surface which provides a sufficient cutting edge for severance of the sheet material being dispensed.

Another object of the present invention is to provide a method of manufacture of tear strips adapted for use with dispensing packages of the type for dispensing sheet material from a roll.

Still another object of the present invention is to provide a method of making a tear strip for a dispensing package, the method being such as to prevent bending of the strip in its own plane during manufacture of the same.

A still further object of the present invention is to provide a tear strip for a dispensing receptacle which may be economically manufactured and efficiently used without danger of injury of the user.

These and other objects of the present invention will appear more fully in the following specification, claims and drawings, in which:

Figure 1 is a perspective view of a dispensing package made in accordance with the present invention.

Figure 2 is an enlarged fragmentary top plan view of the tear strip of the present invention.

Figure 3 is a perspective view of the tear strip being manufactured.

Figure 4 is a fragmentary side elevational view of the tear strip of Figure 1.

Figure 5 is an enlarged sectional view of the tear strip taken on the line 5—5 of Figure 4.

Figure 6 is a fragmentary view of a modified form of tear strip.

Referring now to the drawings, wherein like character

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or reference numerals represent like or similar parts, the dispensing package of the present invention includes a portable box-like receptacle generally indicated by the numeral 10, a roll of sheet material generally indicated by the numeral 12 and a tear strip generally indicated by the numeral 14. The dispensing package is sold, as a unit, with the roll of sheet material 12 enclosed in the box-like receptacle 10. When the user desires a sheet of material it is merely necessary to withdraw or unwind the roll by pulling the same out of the box over the cutting edge of the tear strip 14 until a desired length of sheet material is obtained and then the sheet is severed along the tear strip 14, as shown in Figure 1.

In more detail, box-like receptacle 10 is of the conventional type folded out of a single sheet or blank of cardboard or the like so as to have a front wall 16, side walls 18, a bottom wall 20, a rear wall 22 and a top wall or cover 24. The cover 24 is usually scored at its connection to the rear wall 22 so that it may be pivoted from a closed position to an open position. Top wall 24 is provided with a downwardly extending flat portion 26 which is adapted to fit within the receptacle 10 when the cover 24 is closed.

Tear strip 14, which is made from a thin relatively narrow strip of metal, such as aluminum, or the like, is secured to the front wall 16 adjacent its free edge 28. The cutting surface 30 of tear strip 14 lies adjacent the free edge 28 of front wall 16, as shown in Figure 1 and, as will be explained later in the specification, may extend slightly above the free edge since it is so constructed as to be harmless to the user but of a sufficient cutting edge to sever the sheet material from the roll within receptacle 10. It is of course within the scope of the present invention that the tear strip 14 may be secured to the free edge of the flap 26 of cover or top wall 24.

Referring now to Figure 3 the tear strip 14, which, as stated above, is made from a thin relatively narrow strip of metal, is provided with corrugations 32 extending transversely of the strip and normal to each of its longitudinal edges. The corrugations formed in the longitudinal edges of tear strip 14 extend over a transverse area of the strip sufficient to resist bending of the strip in its own plane during the forming of the corrugations, as will be explained in more detail later in the specification. The corrugations 32 are substantially sinusoidal-shaped looking edgewise of the tear strip 14 whereas the edge of the strip with the corrugations is straight, as shown in the elevational view of Figure 4. Since the corrugations are of the same thickness as the strip 14 prior to their being formed in the strip, and since the longitudinal edge of the strip 14, after the corrugations have been formed therein is straight, there are no projections or serrations on the strip whereby the user of the dispensing package can tear or cut his hands when handling the package. By forming corrugations 32 in the tear strip 14 rather than serrations, the sheet material of roll 12 may be unwound from the roll over the tear strip without damage thereto.

The corrugations 32 are formed in the longitudinal edge portions of tear strip 14 by spaced pairs of opposed circumferentially toothed gear-like elements 34 and 36 respectively. One pair of opposed circumferentially toothed elements 34 includes an upper toothed element 38 and a lower toothed element 40 meshing therewith while the other pair of elements 36 includes an upper toothed element 42 meshing with a lower toothed element 44. The pairs of elements 34 and 36 are so arranged as to engage the longitudinal edge portions of strip 14 and when the strip is moved relative to the elements, the teeth of the elements simultaneously form transverse corrugations in the longitudinal edges of the strip 14. The corrugations 32 extend transversely of the strip a sufficient distance to resist bending of the strip in its own

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plane. As shown in Figure 3 the pairs of die elements 34 and 36 are spaced far enough apart so that the center portion 46 of the strip remains flat after the strip has passed through the pairs of die elements. It has been found if the corrugations 32 are formed in just one longitudinal edge 14 of the tear strip, the tear strip has a tendency to bend in its own plane, and also, if the corrugations extend entirely across the tear strip the corrugations themselves tend to bend. The pairs of die elements 34 and 36 may be rotated in the direction shown by the arrows in Figure 3, while the tear strip 14 may be fed through the elements. On the other hand, the elements 34 and 36 themselves may be rotated and moved along the tear strip with the tear strip held stationary.

The center flat portion 46 of tear strip 14 is provided with X-shaped slits 48 by a suitable punch and die (not shown) after the corrugations 32 have been provided in the tear strip. The slits 48 provide a means of attaching the tear strip to the free edge of one of the walls of the box-like receptacle 10. By cutting the X-shaped slits 48 into the tear strip, the slits form teeth in the tear strip which may be forced or projected through the front wall of the box and folded back to secure the strip in place within the box, as shown at 50 in Figure 1.

Figure 6 discloses a modified form of tear strip in that the finished tear strip 14' has corrugations 32' on only one longitudinal edge. The tear strip 14' is formed by corrugating both longitudinal edge portions of a strip of metal in a similar manner to that disclosed in Figure 3. However, after the corrugations are provided in both edges of a strip of metal, the strip of metal is split or divided along its longitudinal axis by a suitable cutting tool so as to form two tear strips. The tear strip 14' may be provided with the X-shaped slits 48' so that it may be attached to the wall of the receptacle in a similar manner to the previously described tear strip 14.

As is now evident the tear strip of the present invention provides a cutting edge which is straight along the longitudinal length of the tear strip, as shown in Figure 4

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but which is substantially sinusoidal shaped when viewed edgewise of the strip, as shown in Figure 2. Since the thickness of the tear strip is not impaired or changed appreciably when the corrugations are provided therein along its longitudinal edges, in the manner disclosed, the cutting edge of the tear strip is relatively smooth when the hand is run along the same but provides a surface which is sufficient to sever sheets of material from the roll 12 of sheet material.

The terminology used in this specification is for the purpose of description and not limitation, the scope of the invention being defined in the claims.

I claim:

1. A dispensing package for a roll of sheet material or the like, comprising a box-like receptacle having a plurality of walls, a tear strip, means to secure said tear strip to one of the walls of said receptacle adjacent one of its edges, said tear strip having a longitudinal cutting edge formed of corrugations lying adjacent the edge of the wall to which it is secured, the corrugations of said tear strip extending normal to its longitudinal edge.

2. A dispensing package of the character described in claim 1 wherein said means to secure said tear strip to one of the walls of said receptacle include teeth in said tear strip projecting through the wall of the receptacle and bent back against the wall of the receptacle.

3. A dispensing package for a roll of sheet material or the like, comprising a box-like receptacle having a plurality of walls, one of the walls having a free edge, a tear strip, means to secure said tear strip to the wall having the free edge, said tear strip having a longitudinal cutting edge formed of corrugations and lying adjacent the free edge of said wall, the corrugations of said tear strip extending normal to the longitudinal cutting edge of the same.

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