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J. KALTMAN ET AL
WIPER DISPENSING PACKAGE

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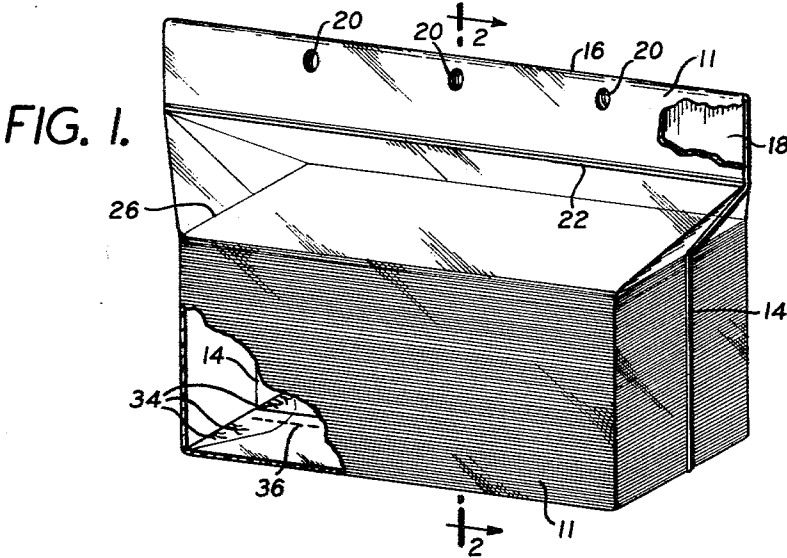


FIG. 2.

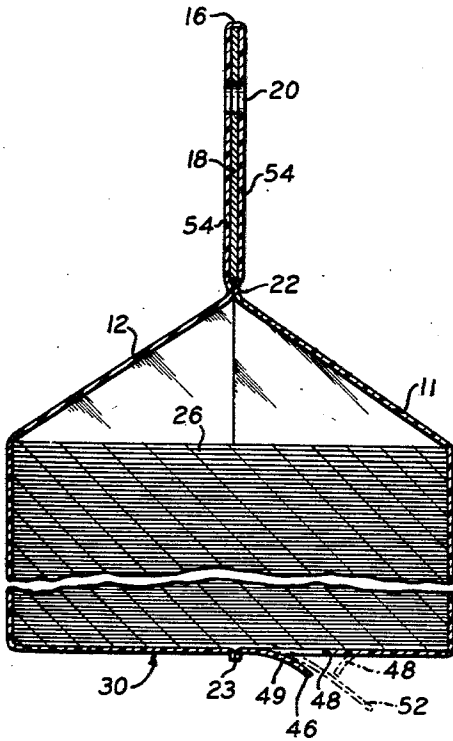
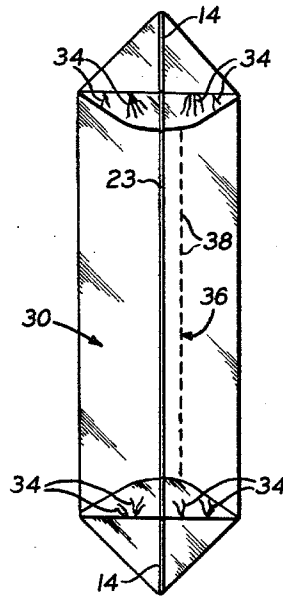


FIG. 3.



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WIPER DISPENSING PACKAGE

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This invention relates to dispenser for wipers such as paper towels, tissues, napkins, or the like; and it relates more particularly to flexible packages which can be used as dispensers.

It is a common practice to sell tissues in boxes which are perforated so as to permit a slot to be torn in the top of the box, and the tissues are then dispensed one at a time through this slot in the box top. For paper towels, and to some extent for tissues also, it is desirable to have a much less expensive dispensing package than the boxes commonly employed. It is an object of this invention to provide such a package.

Because of the lack of stiffness of the sides of the package of this invention, it is not practical to use it in the same way as a box is used for a dispenser for wipers or the like, and it is an object of this invention to provide a dispenser with means of supporting it from the top and with an opening through which an end wiper can be withdrawn from a stack of wipers located in the dispenser.

It is another object of the invention to provide an improved package which is suitable as a shipping container for paper towels or other wipers or the like and which has a perforated tear line in a wall of the package for forming an opening when the package has reached its point of use and has been placed on some support.

The preferred embodiment of the invention constructs the package of sheet material such as plastic films, paper, cellophane (coated or uncoated) and foils; and the invention will be described as a package of thermo-plastic material but it will be understood that some features of the invention are also suitable for paper bags or bags of other thin and inexpensive sheet materials.

Other objects, features and advantages of the invention will appear or be pointed out as the description proceeds.

In the drawing, forming a part hereof, in which like reference characters indicate corresponding parts in all the views;

FIGURE 1 is a perspective view showing a wiper dispensing package filled with a stack of wipers and the view is partly broken away to show partially incised tear lines in the bottom of the package for forming an opening through which wipers can be removed;

FIGURE 2 is an enlarged sectional view taken on the line 2-2 of FIGURE 1, but showing the bottom of the package torn to produce an opening for the removal of the wipers; and

FIGURE 3 is a bottom view of the package shown in the other figures.

The wiper dispensing package as shown in FIGURE 1 is made of transparent thermo-plastic film or sheet material, and preferably of a bi-axially oriented material so as to prevent progression of tears in the material. Particularly suitable materials are polyethylene and polypropylene.

The package has a front panel 11 and a back panel 12, and these panels are preferably heat sealed to one another along their side edges 14. At the upper end of the package, the front panel 11 and the back panel 12 are of one-piece continuous construction where they merge with one another at the location 16 (FIGURE 2).

The upper portions of these panels 11 and 12 enclose

a reinforcing and stiffening element 18 which is preferably of cardboard but may be of other sheet material.

The surfaces of the front and back panels 11 and 12, respectively, which contact with the reinforcing and stiffening element 18, are preferably secured to this element by adhesive. The element 18 is much stiffer than the panels.

There are one or more openings 20 through the upper end of the package for hanging the package on hooks or otherwise supporting it from its upper end.

The heat sealed edges 14 preferably terminate at the region adjacent to the bottom edge of the reinforcing and stiffening element 18. There are good reasons connected with the manufacture of the package which make it undesirable to have the heat sealed side edges 14 extend above the bottom edge of the element 18.

The front and back panels are preferably heat sealed to one another across a transverse region 22 located immediately below the reinforcing and stiffening element 18 and extending from the heat sealed side edge 14 on one side of the package to the heat sealed side edge 14 on the other side of the package. They are also best sealed across the bottom along a seal line 23.

The package contains a stack of paper towels or wipers 26. This stack of wipers is preferably of rectangular cross section and at the portion of the package where the stack of wipers is located, the front panel 11 and back panel 12 are pushed away from one another by the distance necessary to accommodate the stack of wipers 26. This causes the package to be narrower at the region of the stack of wipers because portions of the front and back panels have to extend down the sides of the stack of wipers 26; FIGURE 1 shows the side edges 14 of the package located midway between the front and back of the stack of wipers 26. In order to accommodate this change in the width of the package, the stack of wipers 26 fills only a portion of the height of the package.

The reinforcing and stiffening element 18 is located at a substantial distance above the top of the stack of wipers 26 so as to allow space for the front panel 11 and back panel 12 to converge toward one another as they approach the element 18 with resulting widening of the package as the panels 11 and 12 converge.

The package has a bottom 30 which is formed by folding or gathering portions of the front and back panels, 11 and 12 respectively, and heat sealing them so as to form a substantially flat bottom having an area approximating the area of the bottom of the stack of wipers 26.

This folding of the panels to form the bottom is difficult to illustrate in an assembly view but it is somewhat similar to that of a conventional paper bag bottom and such constructions are well understood in the art so that detailed explanation of the way in which such bottoms are formed is unnecessary for a complete understanding of this invention. For present purposes it is sufficient to understand that the bottom edge is gathered or folded along lines 34, shown in FIGURE 1. It is important to note that this creates double, treble and sometimes quadruple thickness of the sheet material from which the package is made, over some areas of the package bottom.

The bottom 30 has an opening in it formed by tearing the material of the bottom of the package along discontinuous perforated lines 36. These lines 36 are preferably located in the bottom 30 near the front panel 11 so that by having the lines 36 of a length slightly less than the width of the package, the tear lines 36 do not encounter any portion of the package bottom which is of more than single thickness. The gathered and multi-thickness portions adjacent to the fold lines 34 prevent the tearing from progressing too far.

In the preferred construction the lines 36 are made up of a number of aligned slits 38 with short lands between

them and these slits permit convenient tearing along the lines 36. A single tear line 36 can be provided if a narrower opening is desired, and the opening can be provided in the front panel 11 instead of in the bottom. Where the opening is in a wall of the package other than the bottom, it is sometimes more convenient to stack the wipers sideways.

The way in which a wiper can be withdrawn from the package after the lines 36 have been torn to produce an opening in the bottom of the package is illustrated in FIGURE 2. In this figure the opening in the bottom 30 is designated by the reference character 46. The front edge of the opening, that is, the edge nearer to the front panel 11, is designated by the reference character 48 and this edge can be deflected downwardly into the dotted line position shown in FIGURE 2. The rearward edge of the opening 46 is designated by the reference character 49 and this rearward edge can be deflected downwardly into the dotted line position as shown. This provides enough space for a person to insert his hand into contact with the bottom wiper of the stack of wipers 26, and by slightly wrinkling the wiper it is possible to grip it between the thumb and forefinger so that it can be pulled out through the separated edges 48 and 49 of the opening 46.

FIGURE 2 shows a bottom wiper 52 partially removed from the dispenser. As each bottom wiper is removed the next one is exposed for subsequent removal; but there is no tendency for the wipers of the stack to fall out of the dispenser because the opening 46 cannot spread apart at its ends and it is, therefore, necessary to pull the wiper 52 with sufficient force to cause a certain amount of wrinkling of the wiper in order to have it come through the opening 46.

Another feature which prevents wipers from dropping through the opening in the bottom of the package is that the opening 46 does not extend for the full width of the stack of wipers 26, in the preferred construction of the invention, and this means that the wipers have to be distorted not only crosswise but also endwise in order to pass through the opening 46.

FIGURE 2 also shows the heat sealed region 22 in section and shows adhesive 54 by which the front and back panels 11 and 12, respectively, are secured to the reinforcing and stiffening element 18.

The preferred embodiment of the invention has been illustrated and described, but changes and modifications can be made and some features can be used in different combinations without departing from the invention as defined in the claims.

What is claimed is:

1. A wiper dispenser including a package having front and back panels connected to one another for at least a major portion of their side edges, a stack of wipers in

the package and of generally rectangular cross section, the stack displacing the panels from one another with the connected edges of the panels located at the sides of the stack and substantially midway between the front and back of the stack, a reinforcing and stiffening element between the front and back panels at a substantial distance above the top of the stack, the front and back panels extending above the stack and into contact with the opposite sides of the reinforcing and stiffening element, the width of the dispenser increasing progressively beyond the sides of the stack as the front and back panels extend upwardly and converge toward one another as the panels approach the reinforcing and stiffening element, and a bottom of the package with an opening therein extending across the bottom and through which the bottom wiper of the stack can be withdrawn.

2. The wiper dispenser described in claim 1 and in which the reinforcing and stiffening element is a flat sheet located between the front and back panels and secured to the panels, and the bottom of the package is made by folding the front and back panels under the stack to obtain a substantially flat bottom of the package of an area approximating that of the bottom of the stack, the opening in the bottom being somewhat less in length than the width of the stack between the side edges of the package.

3. The wiper dispenser described in claim 2 and in which the package is made of thermo-plastic material and the front and back panels are of continuous one-piece construction across the top of the reinforcing and stiffening sheet, and the side edges of the front and back panels are heat sealed to one another to close the sides of the package and there is a region immediately below the reinforcing and stiffening element over which the front and back panels are heat sealed to one another from one of the heat sealed side edges across the package to the other heat sealed side edge.

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