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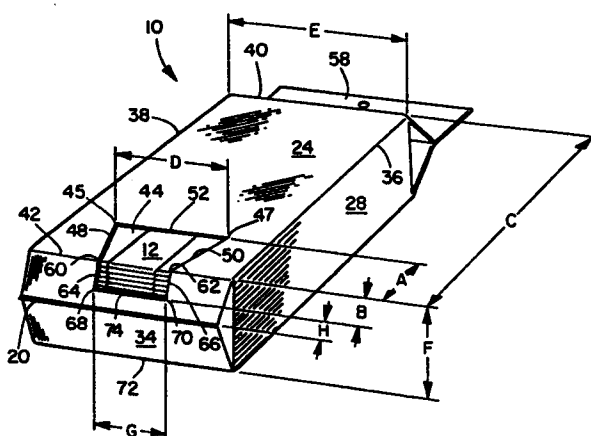
(11) Publication number:

0 223 262
A2

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **86116180.0**(51) Int. Cl.4: **B 65 D 83/08**(22) Date of filing: **21.11.86**(30) Priority: **22.11.85 US 801175**(71) Applicant: **KIMBERLY-CLARK CORPORATION,**
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Glaeser, Hiltl & Partner Fluggenstrasse 13,
D-8000 München 19 (DE)(54) **Soft dispenser package.**

(57) A soft mountable dispenser (10) for disposing wipers (12) in a generally downward motion which consists of a generally cuboid package of plastic material having an opening (44) which is positioned in the lower portion of the front wall (24) of the package (10) and covers in the traverse direction between about one-third to about two-thirds of the traverse dimension of the front wall.

**EP 0 223 262 A2**

Description

5 This invention relates to a soft dispenser package according to the preamble of the main claim. It is in the field of a soft pack consisting of a plastic film for products, especially for wipers of paper or meltblown wipers, towels and the like. Such a package has a substantially cuboid construction forming a front wall, a
10 rear wall, side and end walls and having an opening especially adapted for withdrawing the contained product in a downward motion and having a means for mounting the package in a vertical position.

15 Products, such as folded wipers and towels, are packed predominantly in blanks consisting of plastic films, preferably polyethylene. The above-mentioned packaging material has a number of advantages, but on the other hand, has the particular disadvantage of troublesome withdrawal of the wipers or towels so as to tear the product or the
20 package material, thereby dispensing the towels in numbers greater than one at a time or all at once. Further, the wipers are generally dispensed on rollers or flat-packaged products. The rollers are generally mounted on expensive dispensing apparatus which are difficult to move or
25 reposition and do not dispense the product from a protective container. The flat-packaged products do not dispense the wipers from a vertical position much less from a single support such as a nail or pegboard hanger.

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U.S. Patent No. 4,460,088 discloses a soft plastic pack for paper facial tissues, which includes a tear-open flap defined by converging perforated lines extending inwardly from the corners of the pack. The lines are
35 joined by a through cut which is overlaid with an adhesive strip to facilitate opening and reclosing the package.

Placed in the vertical position, however, this plastic pack, once opened, will not dispense the product one at a time.

U.S. Patent No. 2,885,112 discloses a sheet dispenser
5 which may be mounted in the vertical position. The opening of this dispenser, however, is in the upper region of the front wall of the package and dispenses the towels in the upward direction, which tends to permit the withdrawal of more than one unit at a time.

10 Pertinent art is further illustrated by U.S. Patent No. 3,161,336 issued to R. A. Loescher. This patent discloses a rectangular carton useful in the horizontal position, including a top, bottom and side walls, which is provided with a corner aperture marginally defined by
15 relief portions of the top wall and the adjacent side and end walls of the corner. The product is stacked in a lightly-interbonded manner and interconnected by minor perforation segments along alternate marginal edges of the reverse overfolds. The aperture extends to the bottom edge
20 of the package to enable dispensing bottom sheets.

U.S. Patent No. 2,529,853 discloses a dispenser and its stacked folded sheets adapted to withdraw individual sheets. The aperture in the dispenser is disclosed as extending over the edge between the top and end walls and
25 extends across almost the entire transverse measurement of the top wall, as well as the end wall thickness. This configuration would only be useful in the horizontal position.

The object of the invention is to propose a package
30 mountable in the vertical position for dispensing products such as wipers and towels in the downward direction easily but without dispensing more than one unit at a time and without special measures in terms of material having to be taken for the purpose. This object is solved by a package
35 as defined in the main claim. According to the invention the package is characterized in that at least one of the package walls, especially the large area

front wall (or rear wall), is provided with an opening which is positioned on the large area wall and limited by edges generally configured to a predetermined size relationship to the package dimensions and the towel
5 dimensions.

Accordingly, in the package according to this invention, there is formed, in the region of one of the pack walls, especially lower region, of the generally
10 rectangular front wall, an opening which is limited by edges favoring a tear-open operation because of their arrangement. According to this teaching, the edges are arranged so that the traverse dimension of the opening is not greater than one-half of the width of the front wall,
15 and the upper edge of the opening does not extend above about one-third of the height of the front wall. The package may be fashioned with a tear-open flap which can be arranged so as to be removed or retained after opening. The tear-open flap may also be provided with an adhesive
20 tape consisting of a tape coated with an adhesive and fixed for a predominant part to the tear-open flap by adhesion and overlaps the flap and furthermore, is connected releasably to the adjoining part of the package. A grippable free end of the adhesive enables the package to
25 be opened by detaching the adhesive tape from the package and by pulling open the tear-open flap by further pulling the adhesive tape.

Further features of the package according to the invention are subject to the subclaims. Exemplary
30 embodiments of the invention are explained in more detail below with reference to the drawings wherein.

Figure 1 is a first embodiment in perspective of a cuboid package consisting of the plastic film for holding
35 the wipers and having an opening which extends from the front wall around to the bottom end wall.

Figure 2 is a second embodiment in perspective of a cuboid package consisting of the plastic film and having an opening which is positioned in the lower region of the front wall.

5

10 The drawings illustrate exemplary embodiments of the package which serve here, for example, to hold wipers 12. The packages for holding other articles, for example sanitary towels, and the like, can be designed correspondingly.

15 Referring to Figure 1, the substantially cuboid package 10 consists here of one piece cylindrical blank of weldable or gluable plastic film, for example, polyethylene. The blank of film is placed around the stack of wipers 12 to form a generally rectangular shape. The
20 surface ends of the blank are brought into contact and thermally welded or glued along the bottom seal line 20 and top seal (not shown). The blank then generally conforms to the contents of the package to form a substantially cuboid package 10.

25 The individual areas of package 10 form a front wall 24, a rear wall (not shown), relatively narrow right side wall 28, left side wall (not shown), top end wall (not shown) and bottom end wall 34. The pack walls 24, 28 and 34 are delineated in respect of one another by edges, by
30 the vertical right edge 36 and vertical left edge 38, in the region of the front wall 24 and right side wall 28 and left side wall, respectively. Traverse top edge 40 and traverse front bottom edge 42 are formed in a region of front wall 24 and top end wall and bottom end 34,
35 respectively. The traverse rear bottom edge 72 is formed in the region of the rear wall and the bottom end 34.

The rectangular front wall 24 is provided in its lower region adjacent the front bottom edge 42 with an opening 44 having a traverse width defined as "D". The traverse dimension of the front wall 24 is defined as "E". The dimension "D" should be sized such that the ratio of "D" to "E" should range from about 1:3 to about 2:3, preferably about 1:2. The package 10 is provided with a mounting element 58 for hanging the package in the vertical position. The package has a traverse width defined as "E".

The opening 44 acquires a substantially trapezoid shape by means of two edges 50 and 48 which run respectively from right and left corners 62 and 60 on front bottom edge 42 to top right and left corners 47 and 45. From corners 60 and 62, overlap edges 64 and 66 connect to bottom right and left corners 70 and 68. The bottom opening edge 74 connects bottom corner 68 to bottom corner 70. The distance from top opening edge 52 to the front bottom edge 42 is defined as dimension "A". The height of front face 24 is defined as dimension "C". The depth of the package 10, i.e. the dimension between the front and back walls, is defined as "F". The distance between bottom opening edge 74 and edge 42 is defined as "B".

In order to permit downward removal of the product contained in the package, the opening should be dimensioned according to the following guidelines. The ratio of dimensions "G" to "E" should range from about 1:8 to about 1:4. The ratio of "G" to "D" should range from about 1:1 to about 1:4 and preferably about 1:2. The ratio of "B" to "F" should range from about 0:1 to about 1:2. The ratio of "A" to "C" ranges from about 1:10 to about 3:10. The "B" to "F" ratio is affected not only by the packaging material and the product contained in the package, but also the manner in which the product is folded.

In an embodiment using a seal pack as described in Figure 1, there should occur a separation "H" between the

opening 44 and the seam 20. Preferably this separation should be greater than about 3.2 mm (1/8 inch) to about 9.5 mm (3/8 inch). The dimension "H" depends on factors such as the weight of the package material, the basis weight of the product contained in the package, and the stiffness of the product contained in the package. The B/F ratio is affected not only by the packaging material and the product contained in the package, but also the manner in which the product is folded.

10 Preferably the wipers packaged in package 10 should have an overall thickness "F" greater than about 10.2 cm (4 inches). Preferably the wipers comprise a material having a basis weight not greater than about 500 gsm, preferably not more than about 200 gsm. Basis weight is defined as the weight in grams in one square meter of the wiper. The wiper should have sufficient strength to be withdrawn from the package 10 without tearing.

15 The wipers should be generally centered within the package, and the opening 44 should be positioned over the wiper edge created by the fold. The folded wipers 12 are appropriately arranged so that an edge face 74 faces the opening 44 to permit gripping the wipers 12 for the purpose of removal. Typically, the width of the opening 44 is at least about 3.8 cm (1 1/2 inches), preferably 5.1 cm (2 inches) for heavier weight wipers, such as four-ply towels, to permit such gripping.

20 Referring now to Figure 2, an opening 80, a generally trapezoidal shape, is formed by top and bottom edges 82 and 84 respectively. These edges are joined together at their ends by right and left side edges 86 and 88. The preferred dimensions of the opening 80 are the same as described above for the drawing in Figure 1. Positioning of the opening 80 on Figure 1, however, differs such that the lower edge 84 is separated by a distance defined as "J" from the front bottom edge of 90. In the case of the opening described above where B/F ratio is 0:1, it

corresponds to the opening shown on Figure 2 where the opening does not overlap onto the bottom face 98. The ratio of J/C preferably ranges from about 0:1 to about 1:5, preferably not greater than 1:10. If the product wiper
5 comprises a strong material, the J/C may increase within the range. However, with wipers having less strength, the opening 80 and the embodiment shown in Figure 2 becomes less advantageous. The preferred embodiment for the weak wiper is shown in Figure 1 where the opening 44 extends
10 over the edge 42 and B/F is greater than 0:1.

When B/F is greater than 0:1, the trapezoidal shape should be such that the largest dimension occurs along the top opening edge 52 and the smaller dimension occurs along edge 42 and the smallest dimension occurs along edge 74.
15 When J/C is greater than 0:1, the opening 80 may have the larger dimensioned edge along either the top or the bottom. The openings shown in both Figures 1 and 2 are straight-lined trapezoidal shapes. However, it should be understood that the invention is not limited to linear edges. The
20 corners of the openings may comprise curved regions and the edges may also be curved, but the general shape should be as indicated above.

In a preferred exemplary embodiment, not shown, the opening 44 may be provided with a closing element in the
25 form of a flap fashioned with an adhesive tape. This closing element may be connected by a longer sticking portion to the tear-open flap by adhesion. The opening is covered by a tear-open flap, which is attached by a perforated material to the package and tears along lines
30 which form the previously-described edges.

Preferably, the material of the package comprises polyethylene or polypropylene having a thickness of from about 51 μm to 127 μm (2 to 5 mils), more preferred from about 76 μm (3 mils) to about 102 μm (4 mils).

Claims

1. A soft dispenser (10) mountable in an upright
5 position, package accomodated for dispensing wipers (12)
in a generally downward motion and having a generally
parallelepiped configuration, including a front wall
(24), a rear wall, opposed side walls (28), opposed top
and bottom end walls (34), and comprising at least one
10 opening (44;80)
c h a r a c t e r i z e d b y :

(a) an opening top edge (52;82) on at least one
of said front (24) and back walls generally aligned with
15 said top end;

(b) an opening bottom edge (74;84) on at least
one of said front wall (24), back wall and bottom walls
(34) and generally aligned with the edge (42;90) between
20 said front wall (24) and said bottom wall (34;98);

(c) said right side edge (50) connecting the
right end (47) of said opening top edge (52;82) and the
right end of said opening bottom edge and a left side
25 edge (48) connecting the left end (45) of said opening
top edge (52) and the left end of said opening bottom
edge wherein ratio of the traverse dimension "D" of said
opening (44;80) to the traverse dimension "E" of said
package ranges from about 1:3 to about 2:3, and
30 preferably 1:2.

2. The package of claim 1 wherein said opening
bottom edge (74) is formed on said bottom wall (34), and
the ratio of the dimension "B" to height dimension "F"
35 comprises from about 0:1 to about 1:2.

3. The package of one of the preceeding claims

wherein the ratio of the vertical height "A" of said opening (44;80) to the vertical height "C" of said package (10) comprises from about 1:10 to about 3:10.

5 4. The package of one of the preceeding claims wherein the dimension from said back wall to said front wall (24) is less than about 10 cm (4 inches).

 5. The package of one of the preceeding claims
10 wherein the ratio of "G" to "E" comprises from about 1:8 to about 1:4.

 6. The package of one of the preceeding claims wherein said edges (45,47,68,70) are arcuate in shape.

15 7. The package of one of the preceeding claims wherein said package (10) comprises a mounting means (58) formed on said top end.

20 8. The package of claim 1 wherein the ratio of "G" to "D" ranges from about 1:1 to about 1:4.

 9. The package of claim 8 wherein said ratio is about 1:2.

25 10. The package of claim 8 wherein said ratio is less than about 2:1.

 11. The package of one of the preceeding claims
30 wherein said opening side edges (48,50;86,88) are generally converging and said opening (44,80) defines a trapezoid shape on said front wall (24).

 12. The package of one of the preceeding claims
35 wherein said wipers (12) are folded within said package

in a Z-fold configuration.

13. The package of one of claims 1 to 11 wherein
said wipers are folded within said package in an
5 interfolded configuration.

14. The package of one of the preceeding claims
wherein said wipers have a basis weight of less than
about 500 gsm.

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15. The package of claim 1 wherein "H" of said
packaging ranges from about 3.2 mm (1/8 inch) to about
9.5 mm (3/8 inch).

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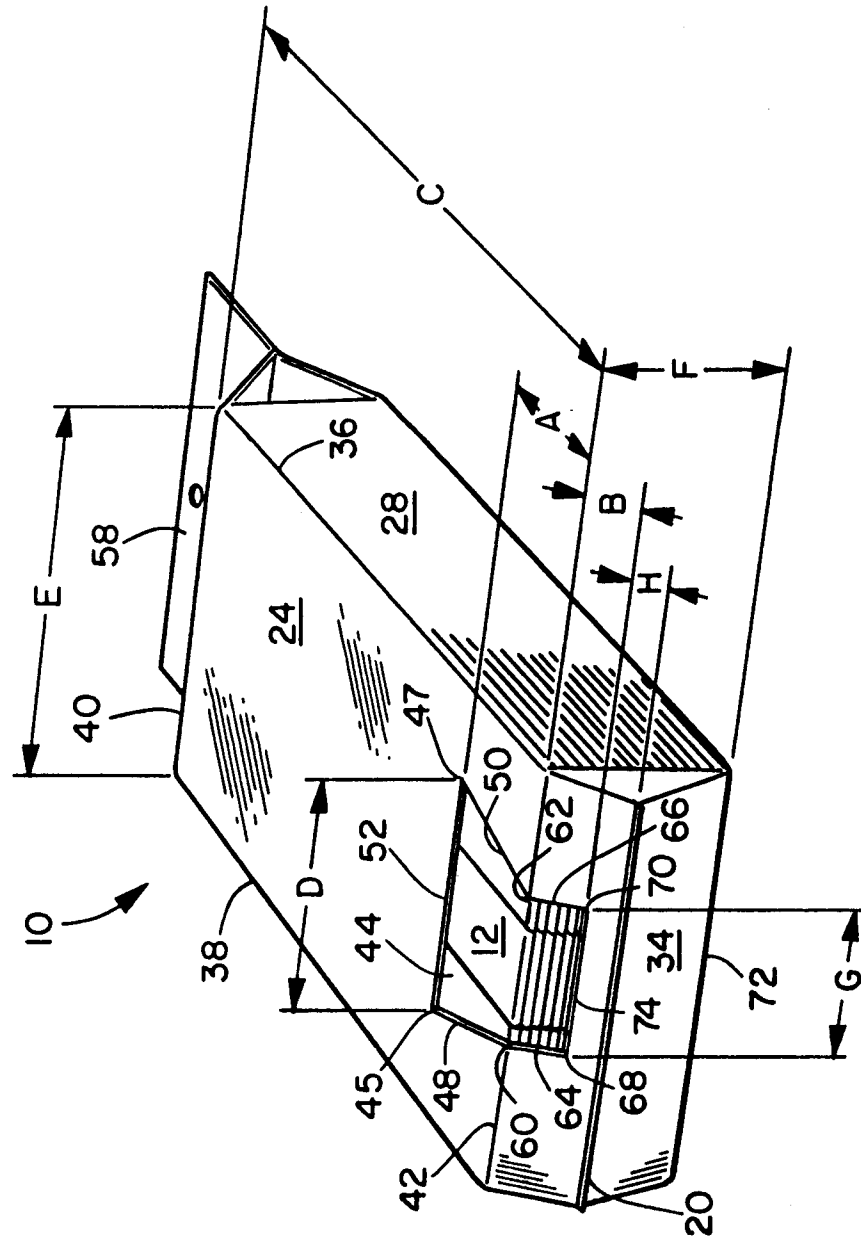


FIG. 1

