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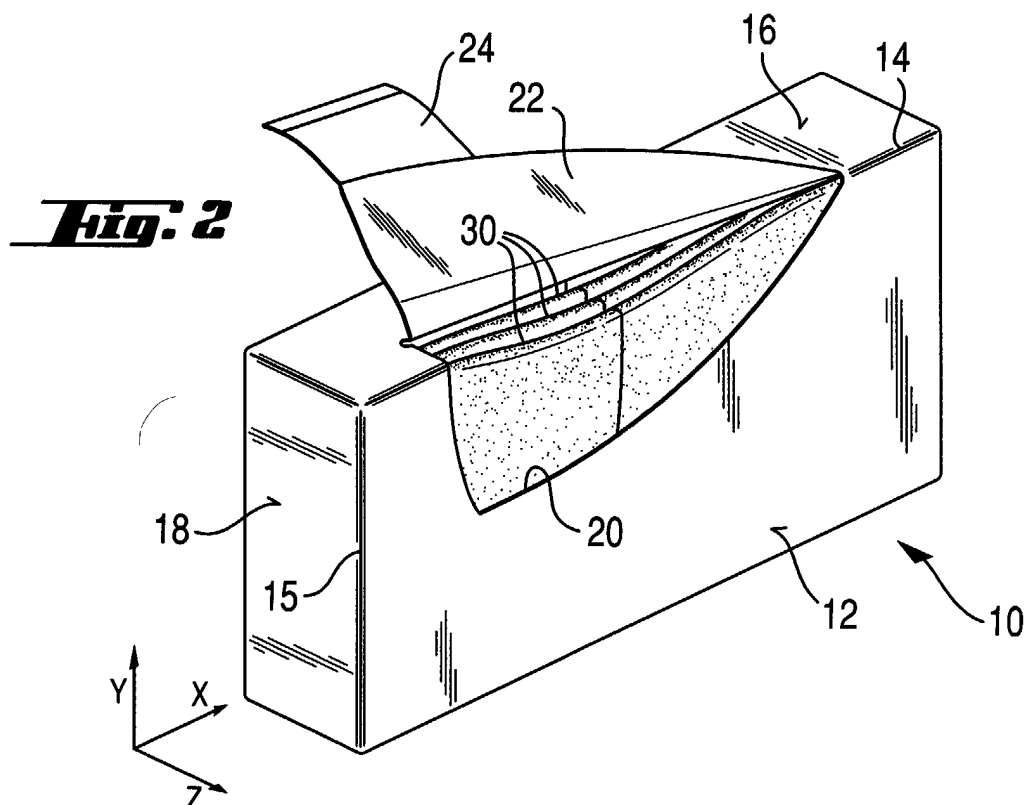
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(54) **Soft package for absorbent tissue sheets having an assymetric opening**

(57) The present invention relates to soft pocket packages for absorbent tissue sheets, such as handkerchiefs or cosmetic tissues. Typically such packages contain more than a single tissue sheet. In order to extract a single sheet from such a package, it is necessary

to provide an opening in the package such as a cutout in the package material allowing access. According to the present invention the opening is assymmetric in at least two cartesian coordinates, preferably resembling a sail design.



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Description

Field of the Invention

[0001] The present invention relates to soft pocket packages for absorbent tissue sheets, such as handkerchiefs or cosmetic tissues. Such handkerchiefs are widely used, especially in Europe, and have conventionally replaced cloth sheets for absorbing nasal excrements or being used for wiping of cosmetics. Typically such packages contain more than a single tissue sheet. In order to extract a single sheet from such a package, it is necessary to provide an opening in the package itself and conventionally provide a cutout in the package material allowing access, but also providing a re-closure capability to store the package and the remaining tissue sheets in a hygienic manner. According to the present invention the opening is asymmetric in at least two cartesian coordinates, preferably resembling a sail design.

BACKGROUND OF THE INVENTION

[0002] Packages for absorbent tissue sheets are widely used, and many publications show or refer to such packages. For example EP 401 621 shows a parallelepiped package with an opening extending to two sides of the package. The opening is provided with a flap closure, which is formed by cutting the package material along a line with two end points, thus creating a flap hinge between the two end points in the package material and thereby also providing a re-closure capability to the package. The re-closure is further improved by the provision by a closure means; in this case an adhesive tape tab. Other packages in the same field of technology are shown for example in DE 2949496, showing a package with a linear outline, DE 3911779 also showing a package with a rectangular type of opening, DE 3915192 showing a package having an opening with a non-linear outline, or DE 3920065 combining various geometrical shapes in the way the opening is provided in the package. Another package design, which involves only a single side of the package, can be found for example in German utility model G 9010670.9 or German utility model DE 9321429.

[0003] In all these disclosures the opening provided in the packages are shown and intended to be symmetric. This has the benefit of allowing the user of such a package to retrieve an individual article by grabbing it in the center of the opening and retrieving it without any asymmetric unfolding. When designing an opening for a package of absorbent tissue sheets, an optimization process between the desire of convenient accessibility and hygienic storage of the remaining sheets after retrieval of one has to be made. A longer opening and reaching deep into the side of the package favor accessibility. Hygiene is improved with smaller openings. Any improvement in this respect, especially for disposable tissue handkerchiefs, is a major step for the consumer

for such articles as they are not handled with great care and have to satisfy both the convenience aspects when retrieving articles, as well as the hygienic aspects when storing the package with the remaining articles, for example in a pocket or lady's hand bag.

[0004] It is hence an objective, according to the present invention, to provide an improvement in accessibility, while at the same time improving the hygienic storage of the remaining tissue sheets in a package.

SUMMARY OF THE INVENTION

[0005] The present invention therefore relates to a package for absorbent tissue sheets in which the package opening has been selected such that its surface is minimized while providing a better retrieval and presentation of the article than conventionally possible in the opening provided by the prior art, or existing packages for such tissue sheets. The present invention therefore provides an asymmetric opening on the surface of the largest side of a parallelepiped package for tissue sheets, which opening also includes an edge of the respective side of the package. This creates a package with an opening having an asymmetry in 2 cartesian coordinates. More preferable, the opening according to the present invention extends across two surfaces of the parallelepiped package and has asymmetry in all three cartesian coordinate directions. In a preferred embodiment the present invention utilizes the material conventionally cut away to form an opening and provides a closure flap from such material by creating the opening through a cut in the package material with the cut having two end points and thereby creating a hinge line between the two endpoints along which the package material can be folded. It is thereby providing a flap, which is coextensive with the opening in the package. In an even more preferred version, such a flap is provided with a closure means, which can for example be provided by an adhesive tape tab.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006]

Fig. 1 is a perspective view of a preferred embodiment according to the present invention.

Fig. 2 shows the package of Fig. 1 in its opened condition.

Fig. 3 is a plan view of an alternative embodiment to the package shown in Fig. 1.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0007] The present invention relates to a package of soft absorbent tissue sheets, such as sheets of disposable paper handkerchiefs well known in the art. Such

packages are typically made of plastic film materials or paper sheets and provided in a size convenient for transportation for example in pockets of trousers or in a purse or handbag.

[0008] The details of the selection of materials for such products can be taken out of any of the numerous publications quoted above and especially from the disclosure found in EP-A 743 264.

[0009] The packages are made out of blanks, for example out of plastic, for example poly-ethylene film material, which is folded around the tissue sheets during manufacturing of such packages. The film material blank is cut to the appropriate size for folding around the packages and methods of folding can be seen also in the above-mentioned disclosure references. An opening is cut into the film material and when a flap is intended to be provided by the material coextensive with the opening, the opening is cut in such a way that upon first opening of the package, a designated separation line within the package material is broken. This can be achieved by a breakable cut such as e.g. by small elements bridging the two sides of the cut, as in perforations, micro perforations, or a cut extending only into a portion of the material thickness, which may be provided by laser or dye cutting, or any of the usual ways of creating a separation line of weakness. No particular difference to the opening formed in accordance with the state of the art needs to be used by the present invention as far as making of the opening is concerned.

[0010] The present invention resides in the selection of a shape of the opening, which hereto forth has not been disclosed or considered by those skilled in the art. The opening that is formed in the package is asymmetric, at least in two cartesian co-ordinates and preferably in all three. This results in an opening on one side of a parallelepiped package, which is asymmetric. Preferred embodiments are best explained by reference to the appended drawings now being described in greater detail. Particular preferred are triangular shaped openings, more preferable triangular openings in which one or more of the sides of the triangle are curved so that the triangle has a curvilinear periphery, most preferable without pointy corners. As shown in the figures this results in a 'sail' shaped opening.

[0011] Fig. 1 is a preferred embodiment according to the present invention in which a package (10) is shown together with an x-y-z cartesian coordinate system. The largest extension X of the package is in the x-coordinate direction, the smallest extension Z of the package is in the z-coordinate direction, and the extension in the y-coordinate Y is smaller than the X extension and larger than the Z extension. A cut line (20) starting at reference number 1 is shown and reaches its end at reference number 2. The line along which the cut is formed is asymmetric in respect to the x-and y- coordinates and in the case of Fig. 1 also the z-coordinate. However, according to the present invention the asymmetry in z direction is not mandatory and the endpoint (2) of the cut

line (20) could also end at a point on the edge (14), formed between the surface (12) of the package and the surface (16) of the package, thereby including the edge (14) in the opening as part of the periphery of the opening.

[0012] According to the present invention, an edge, such as edge (14) or edge (15) are formed between two surfaces of the package (10), while a corner is formed where three surfaces (12, 16, 18) of the package meet. In the case of the preferred embodiment shown in Fig. 1 where the cut line (20) extends from the corner (14) into the surface (12) and further into the surface (16) crossing the corner (14) again, a flap (22) is formed, which can be folded along the line, formed between the starting point (1) and the end point (2) of the cut (20). The opening as shown in Fig. 2 in its opened condition then allows direct access to the tissue sheets (30) inside the package.

[0013] It is, of course, also possible that an asymmetric opening is provided including the edge (15) of the package, while this would also satisfy the desire of optimizing hygienic continued storage of articles remaining inside the package, while providing improved access to the tissue sheets (30) inside the package, it is less preferred than the embodiments shown in the figure including an opening which extends and includes one of the edges extending in the x-coordinate as these edges are the longest edges of a parallelepiped package according to the present invention.

[0014] The surprising effect of the asymmetric shape selected in accordance with the present invention, besides the possibility for providing it in an aesthetic pleasing curvature, is the fact that the relatively long opening extension along edge (14) allows excellent access to the articles (30) as is shown in Fig. 2, while at the same time reducing the size of the opening relative to a symmetric opening, which provides the same level of accessibility to the absorbent tissue sheets.

[0015] The preferred openings as shown in the figures have a triangular or semi triangular shape, depending on whether the opening is formed by linear or curvilinear lines. In the shown curvilinear lines, the triangular shape reaches into the side (12) of the packaging, such that one corner of the triangle almost extends in the y-coordinate dimension to the mid point or half of the extension of the package in the y-coordinate. Of course, this would be the x-coordinate if the opening were to include the edge (15). In general the opening should reach into the side (12) of the package somewhere between 50% and 20%, preferably between 45% and 30% of the Y extension of the package in order to achieve the desired result. The extent the opening reaches into the side (16) of the package depends on the location of the end point (2) of the cut (20). This should preferably also have an extension between 20% and 50% of the Z extension of the package. The extent of the opening along the edge (14) of the package should be between 95% and 40% of the X extension of the package. Preferably, this extent

of the opening is between 60% and 90% of the X extension of the package and most preferably as shown about 60% to 70% of the X extension of the package.

[0016] If the opening is provided with a closure flap (22) as shown in the preferred embodiments, it has been found that in particular the endpoint (2) of the cut can be extended by ripping the package material without intending to do so by users of such packages. This may cause an aesthetic and a hygienic problem for the package. It is therefore desired to provide the endpoints (1 and 2) of the cut (20) with a rip stop circle as shown at the endpoint (2) in Fig. 1 and Fig. 2. The same can of course be provided at the endpoint (1) of the cut line (22) but as this preferably ends on the edge (14) of the package it may not be provided there.

[0017] Also, if a flap (22) is created by a cut (20) in the package material, such a flap can preferably be provided with a re-closure feature. Two preferred embodiments of tape tab type re-closure means are shown in the drawings of Fig. 1 and Fig. 3. The tape (24) is on one side provided with an adhesive means which, however does not extend throughout the whole surface of tape (24) but has a region without adhesive at the opening tape of the tape tab (24), thereby facilitating easy grab of the tape tab. In the preferred embodiment shown in Fig. 3, the tape extends along a longer length of the cut (20) of the flap (22) and thereby provides additional hygienic benefits. From an economic point of view, this can be achieved without an additional cost by maintaining the overall surface area of the tape tab (24), which will result in the same area being adhesively attached in either of the embodiments shown in Fig. 1 or Fig. 3. It has also been found that tapes having a longer extension across the cut of the flap (22) are less due to contamination because the extremities of the adhesive surface in an open condition as shown in Fig. 2 are further apart, thus reducing the probability of a contamination on one end of the exposed adhesive to spread towards the other end of the adhesive on the closure tape (24).

[0018] Finally it should be noted that if a flap is desired it can be provided preferably as indicated above, however attaching another material piece to the package to provide the flap can also provide it. Such attached flaps have the advantage that they can be selected to be larger than the opening and hence provide improved closure of the opening. This can also be achieved in the cut out flaps as shown in the preferred embodiments by extending the cut edge of the flap with extra material. In either design the closure means can be provided on the material of the flap, which extends beyond the opening.

[0019] While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the invention. It is therefore intended to cover in the dependent claims all such changes and modifications that are within the scope of this invention.

Claims

1. A soft package (10) for absorbent tissue sheets (30) in the shape of a parallelepiped said rectangular parallelepiped in a cartesian coordinate system having a longest extension X in the x-coordinate, a shortest extension Z in the z-coordinate, and an extension Y in the y-coordinate said Y extension being smaller than the X extension and longer than the Z extension, said package (10) having an opening extending in the x-and y-coordinate, said package (10) having an edge (14) along the x-coordinate and an edge (15) along the y-coordinate, said package (10) being **characterized in that** said opening is asymmetric in respect to the x-coordinate and the y-coordinate and said opening comprises at least one edge (14, 15) of said package (10).
2. A package (10) according to claim 1 wherein said opening also extends in said z-coordinate and said opening is also asymmetric in the z-coordinate.
3. A package (10) according to claim 1 or 2 wherein said opening is provided by a designated separation line (20) in the package (10) material, preferable by a breakable cut (20), said separation line (20) has a starting point (1) and an end point (2), which points (1,2) are spaced apart and form a hinge line between said points (1,2) to allow the package material, which is coextensive with the asymmetric opening, to be used as a flap (22) by folding away the flap (22) from said package (10) along said hinge line to provide access to said tissue sheets (30).
4. A package (10) according to claim 3 wherein said flap (22) is provided with a closure means (24), preferably an adhesive tape tab (24).

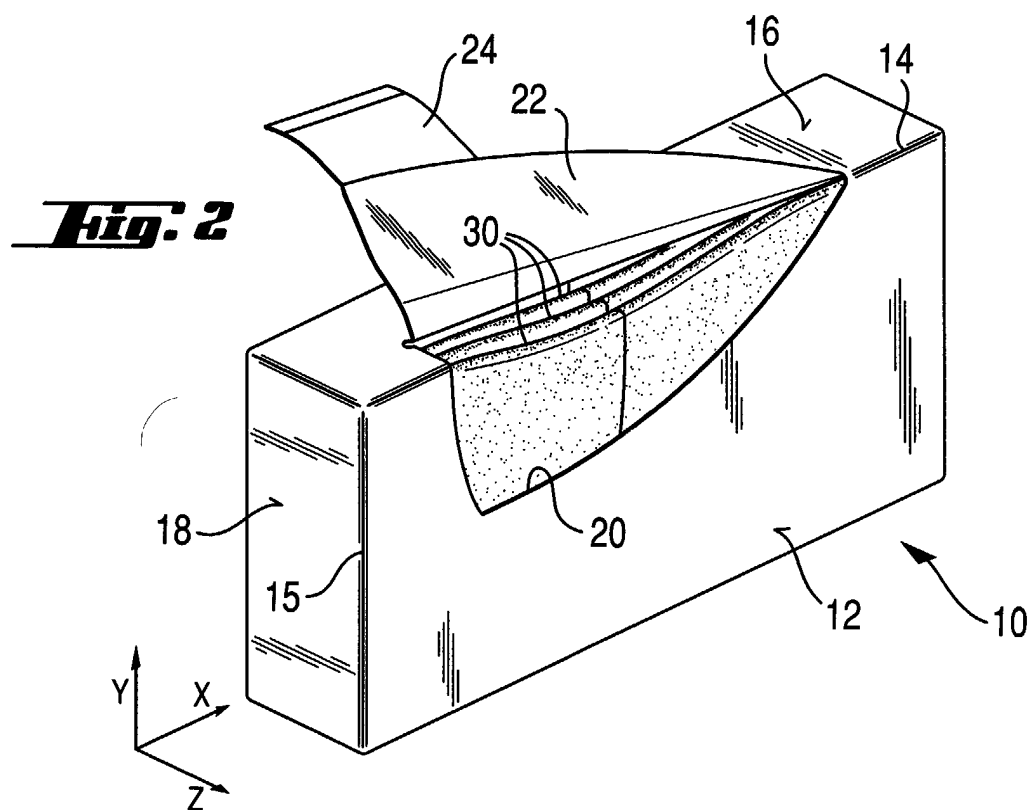
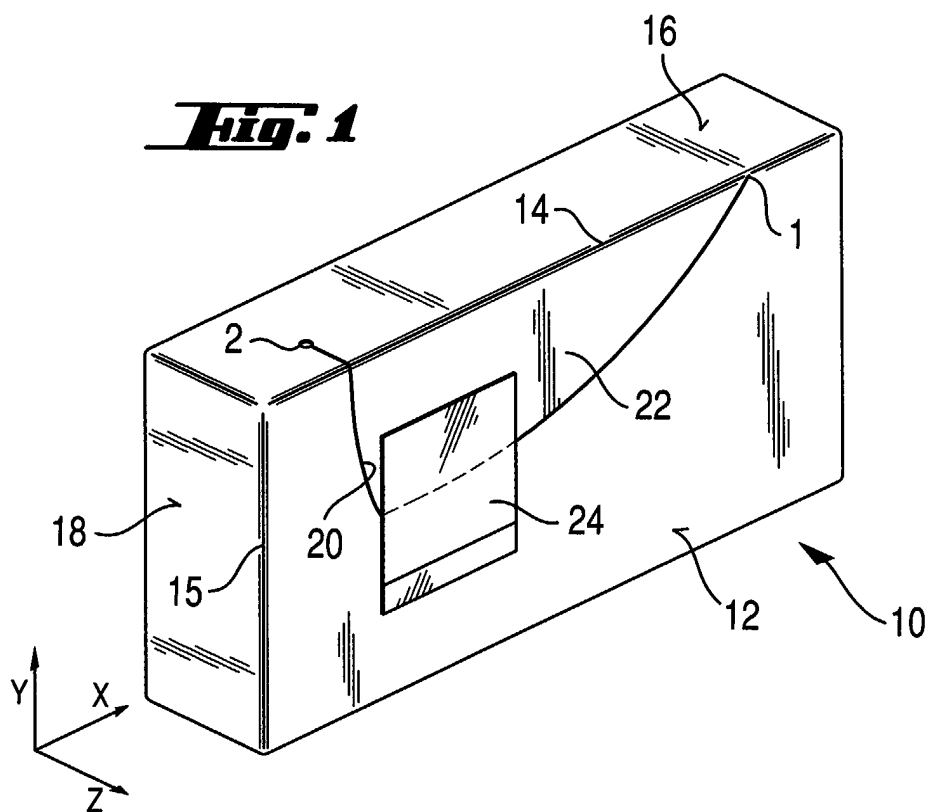
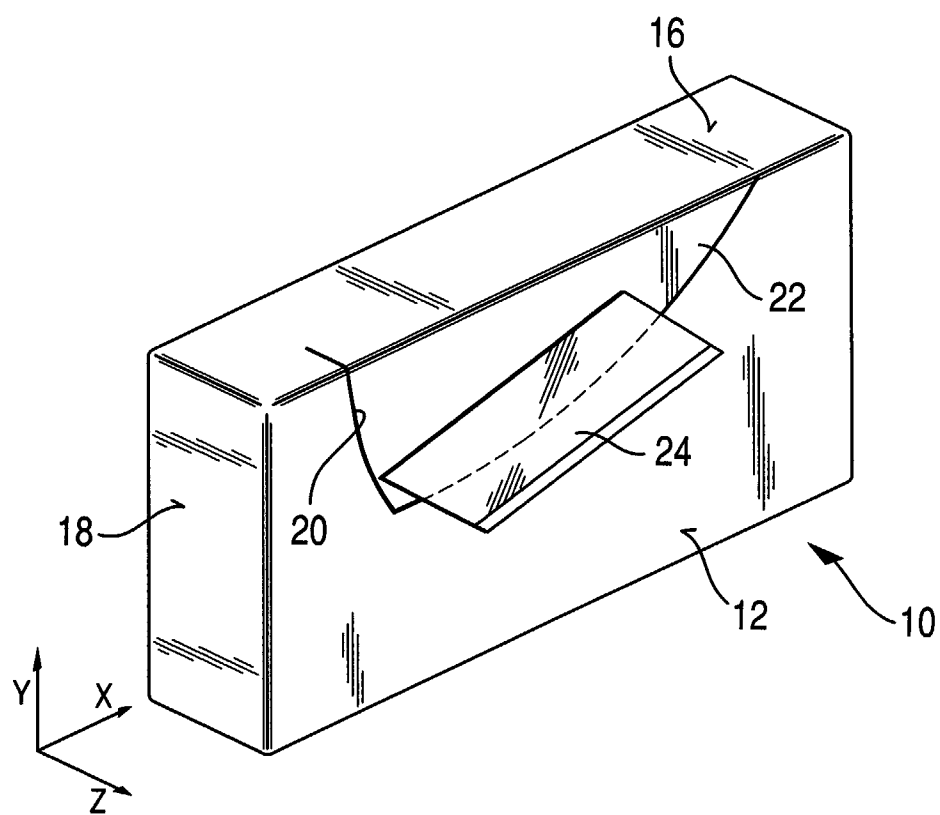


Fig. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 01 12 9421

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 446 628 A (SENNING CHRISTIAN VERPACKUNG) 18 September 1991 (1991-09-18) * the whole document *	1	B65D75/58
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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THE HAGUE		8 May 2002	Fournier, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPC FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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