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(72) Inventors:
• **Sanchez-Fernandez, Lucia del Carmen**
72230 Puebla (MX)
• **Canales-Espinosa De Los Monteros, Carlos**
72230 Puebla (MX)
• **Martini-Merlo, Juan Miguel**
72230 Puebla (MX)

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(71) Applicant: **Grupo P.I. Mabe, S.A. de C.V.**
72230 Puebla (MX)

(74) Representative: **Petraz, Gilberto Luigi et al**
GLP S.r.l.
Viale Europa Unita, 171
33100 Udine (IT)

(54) **Flexible container with dispensing opening**

(57) According to the present invention, a flexible container for non-intertwined wet wipes is provided, which has a substantially rectangular shape comprised by a top face (5), a bottom face (5a) and side faces (6), which short ends (2) are sealed; the container has a dispensing opening (11) which is formed by detaching a detaching area (4) which is delimited by a perforation (3), and a flexible seal arranged for tightly sealing the con-

tainer once it has been opened. The dispensing opening (11) is formed by a slot starting at a point located at the top face of the flexible container and projected towards one of the side faces thereof, defining a top portion (7) and a bottom portion (8) of the dispensing opening (11), through which the finger may be introduced so as to pull outside the wet wipe located at the top part of the stack, without dragging the next wipe.

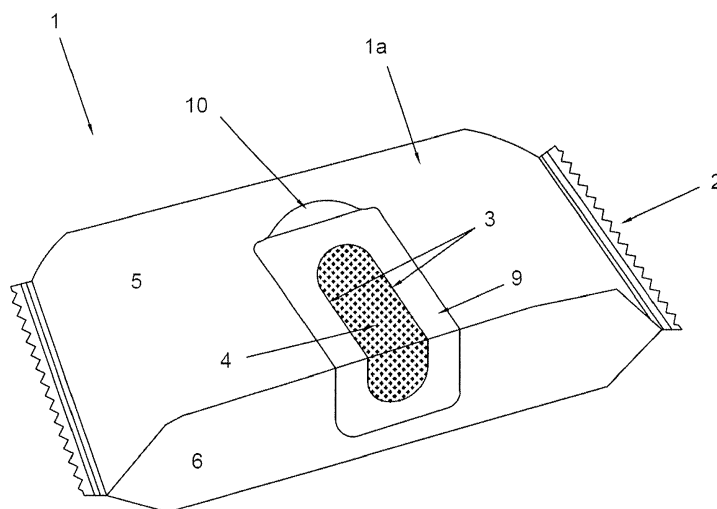


FIGURE 1

Description**FIELD OF THE INVENTION**

5 **[0001]** The present invention embodiments shown are generally related to flexible containers and, more particularly, to flexible containers for storing and dispensing wet wipes or any other similar product. Specifically, a flexible container sealed by its ends with a dispensing opening is described, with an arrangement which is suitable for allowing the dispensing of wet wipes or any other similar product one at a time, without dragging the next product outside of the container.

BACKGROUNDS OF THE INVENTION

10 **[0002]** Currently, a plurality of flexible containers are used for wet wipes, among the most common ones we find those related to the wet wipes containers in a vertical stacking arrangement, which are contained within plastic wrapped-flexible and impermeable disposable containers. The wrap may be opened and positioned within the main container so as to fill the main container with wet wipes. Other kind of commonly used packaging are the cylindrical wet wipes containers, which are comprised by a main rigid structure, which top part has a folding lid providing access inside the container which allows for the dispensing of wet wipes through a top opening formed by a perforation which forms a flexible "window" which allows to release one wipe at a time. Even other type of wet wipes container is related to those containers of the type of those comprised by a substantially oval-shaped rigid container which top face allows for wet wipes dispensing through an opening which, in turn, is covered by a folding lid.

20 **[0003]** There are currently several containers proposals. For example, US patent 2,118,380 describes a rigid container for tissues, which is substantially rectangle-shaped and has a top end with a lid area defined by a frangible perimeter line comprising a top part of the container and a top part of one of the side faces.

25 **[0004]** One disadvantage of the container of US patent 2,118,380 versus the present invention, lies on the use of a rigid container, which requires certain intertwining of the contained product as the container is not flexible, the access to the product is not allowed once the container has started emptying; further, the lid of the container of US patent 2,118,380 is not reusable as in the present invention, so in case of containing wet wipes its shelf life would be diminished due to the contamination and the loss of lotion when being exposed to the environment.

30 **[0005]** US patent No. 2,529,853 describes a tissue container with features similar to those of the present invention, as it discloses a container which has an opening comprising a portion of the top part and a portion of one of the side faces of the container; said container of US patent 2,529,853 allows for the dispensing of tissues thanks to a fold formed at the ends of same as, unlike the present invention, when being a rigid container and not a flexible one, it is not possible to reach the bottom of same once it has been practically emptied; likewise, said container does not have a reusable lid which allows to cover the contents when they are not to be used, so there exists the risk of contamination of the product due to the environment.

35 **[0006]** European patent application No. 0,339,830, describes a tissue container which allows for the dispensing thereof thanks to the friction exerted when contacting the top ends of the container. As compared with the present invention, the container disclosed by patent application EP 0,399,830 also uses "friction" means for dispensing the product, thus allowing the removal of one single sheet at a time; nevertheless, said document requires of a more elaborated mechanism, as it requires a dispensing slot which is only at one of the faces of the container, and a "thrust" mechanism, which maintains a constant pressure exerted upon the ends of the dispensing slot so as to achieve the necessary friction coefficient which allows for performing the function of dispensing one single sheet at a time. On the other hand, the present invention does not require of any "thrust" mechanism for exerting pressure at the ends of the dispensing slots, as, thanks to the container arrangement, it is possible to achieve the necessary friction for dispensing the wet wipes; so patent application EP 0,399,830 clearly does not solve the same technical problem.

40 **[0007]** None of the above described documents comprises a container comprised by a main flexible structure comprising a slot formed by a perforation, which starts from a portion of the top face to a portion of one of the side faces of the container; said perforation is covered by an adhesive seal which covers said opening. There is, thus, the need for a non-intertwined wet wipe container which allows for dispensing the top wipe of the stack without dragging next wipe outside the container.

OBJECTS

45 **[0008]** The main object of the present invention is to provide a flexible container for non-intertwined wet wipes, which allows for dispensing a single wipe at a time, thanks to the shape, dimensions and arrangement of the dispensing opening, these elements are combined with the friction exerted by the wipe with the container.

[0009] Another object of the invention is: to provide a flexible container for containing wet wipes which has a middle

dispensing opening, comprising from one portion of one of the side faces to one portion of the top face.

[0010] A further object of the present invention is that said container has a flexible seal which covers both portions of the dispensing slot.

[0011] Another object of the invention is: to provide a flexible container which has a flexible seal covering both portions of the opening slot, and which is of the same material as the container.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The above aspects and some of the advantages attending this invention, will be better understood when reading the following detailed specification and when considering same along with the attached drawings, wherein:

Figure 1 is a perspective view of the flexible container with the flexible seal closed.

Figure 2 shows a perspective view of the flexible container where the perforation forming the slot is seen without the flexible seal.

Figure 3 is a perspective view of the flexible container where the flexible seal is seen opened.

Figure 4 shows a front view of the wet wipes dimensions.

Figure 5 is a front view of the dimension lines comprised by the fold lines in the wet wipes.

DETAILED DESCRIPTION OF THE INVENTION

[0013] Figure 1 shows a perspective view of a flexible container which is comprised by a plastic material main structure (1a).

[0014] The main structure (1a) of the flexible container has a substantially rectangular shape comprised by a top face (5), a bottom face (5a) and side faces (6), which short ends (2) are sealed between them by a heat-sealing process or any other commonly used sealing process; a perforation (3) defines a substantially oval-shaped perimeter path (not being restricted to same), so as to form a detaching area (4); said detaching area (4) is formed by a point located at the top face (5) of the flexible container (1) and is projected towards one of the side faces (6) of the flexible container (1); said detaching area (4) formed by the perforation (3), is covered by a flexible seal (9) which is comprised by a substantially rectangular tab (not being restricted to said shape) which surpasses the length and the width of the detaching area (4); an opening flange (10) is formed in one of the free ends of the flexible seal (9) so as to ease the detaching thereof.

[0015] Figure 2 shows a perspective view of the flexible container (1), which is comprised by a top face (5), a bottom face (5a), and side faces.

[0016] Based on figure 2 which shows a perspective view of the flexible container (1), the detaching area (4) without the flexible seal (9) (see figure 1) may be seen, said detaching area (4) is comprised by the same material as the flexible container (1), defining one single piece which has a perimeter defined by the perforation (3) so as to be, thereafter, detached by the top flexible seal (9) which will be described below in the present application.

[0017] Figure 3 shows a perspective view of the flexible container (1), in said figure 3, one may see the flexible container (1) wherein the flexible seal (9) has been removed by the opening flange (10), once said top flexible seal (9) has been removed, we may appreciate that the detaching area (4) is attached to the bottom part of the top flexible seal (9) so as to form a dispensing opening (11) which allows for the access to the wet wipes (12); said dispensing opening (11) has a top portion (7) and a bottom portion (8).

[0018] As we may appreciate in said figure 3, the flexible seal (9) has a sensing adhesive (13) throughout the length and the width of same, except for the opening flange (10); likewise, said flexible seal (9) is longer and wider than the dispensing opening (11), so the flexible seal (9) is adhered to the flexible container (1) over the detaching area (4) which is formed by the perforation (3), and when opening same by the first time, said perforation (3) is detached and the detaching area (4) is adhered to the bottom part of the top flexible seal (9) so as to allow for the flexible container (1) to be again opened and closed by the flexible seal (9) as many times as necessary for dispensing the wet wipes (12); likewise, each time it is closed, the detaching area (4) adhered to the top flexible seal (9), is located over the dispensing opening (11) such that the wipes (11) are not contaminated with the adhesive (13) of the flexible seal (9).

[0019] The main object of the invention is to provide a flexible container for non-intertwined wet wipes, stacked within the container, which allows for dispensing one wipe at a time, this is achieved through the arrangement of the dispensing opening (11) along with the folding-manner of the wipes before introducing same to the container.

[0020] The dispensing opening (11) is formed from a point located at the top face (5) of the flexible container (1) and projects towards one of the side faces (6) of the flexible container (1), thus defining a top portion (7) and a bottom portion

(8) of the opening, thanks to said arrangement the dispensing opening (11) allows to take the top wipe (12) of the flexible container (1) through the fold (12c) of same, and remove it by causing the container to "friction" with the wipe, thus easing its removal one at a time with no need of foreign means such as spring thrust mechanisms; said function is repeated each time independent of the number of wipes contained.

[0021] Regarding the dispensing opening (11), a series of tests were performed for determining the minimum and preferred dimensions for effecting the function of dispensing wipes, thus achieving the friction coefficient needed for its correct detaching, table 1 shows the minimum and preferred parameters of the dispensing opening in a schematic and resumed way.

TABLE 1.- Dispensing Opening Dimensions	
Minimum Width	1 cm
Maximum Width	10 cm
Minimum length of the top part of the dispensing opening at the top face of the container	A fifth part of the width of the top face of the container when this is filled with wet wipes
Minimum length of the bottom part of the dispensing opening at the side face of the container	A fifth part of the height of the side face of the container when it is filled with wet wipes

[0022] These dimensions allow for the introduction of the finger through the top part (7) of the dispensing opening (11) to take the wipe through the top fold (12c) of same and pull it outside, such that it may be removed thereof without dragging the subsequent wipe(s) outside.

[0023] Figure 4 shows a front view of a wet wipe which may be used in the flexible container (1). Likewise, a series of tests were performed for determining the preferred measures that the wet wipes must have; the results show that the width (12a) of the wipes may range between 7 and 40 cm, while the suitable length (12b) would range between 10 and 40 cm.

[0024] Figure 5 shows a front view of a wipe comprising a preferred alternative wherein the wipe has a "Z" shaped fold (12c) so as to be available at the end of the dispensing opening (11), such that the wipe may be taken from the edge (unfolding same) and pulled outside the container in an angle ranging between 0° and 90° of the horizontal, such that the shape and dimensions of the dispensing opening (11), along with the "Z" shape folding-manner of the wipe, result in that, when removing the wipe from the container certain friction of same with the container walls is caused, which allows for separating the top wipe from the next one so as to be dispensed. In other alternative embodiments where the end edge of the wipe is not available, the wipe may be taken by the fold and lifted so as to be dispensed (without unfolding same).

[0025] Referring to the wet wipe embodiment, a series of tests were performed so as to reach the dimension of the body of the wipe and the needed folds so as to achieve the function of allowing the user to easily take it, even when the flexible container (1) has been totally emptied; thus, the folds of the edges of the wet wipe may range between 2 and 15 cm, while the central part of same may range between 5 and 25 cm.

[0026] One embodiment of the invention is based on the fact that the flexible container may have any shape.

[0027] Another embodiment of the invention allows making the perforation (3) at any part of the flexible container (1) provided that the dispensing opening (11) comprises the front and top faces of the container.

[0028] Another embodiment of the invention allows making the flexible seal (9) in any shape, size or material.

[0029] Another embodiment of the invention allows using the flexible container (1) so as to accommodate any type of product, such as wet wipes, tissues, etc.

[0030] Another embodiment of the invention allows storing wet wipes without making the "Z" shaped fold (12c) at the ends of same.

[0031] In one embodiment of the invention, the fastening flange (10) is located at the edge of the flexible seal (9) which is located over the front face (6) of the container, such that, in order to open it, the seal is pulled upwards.

[0032] In a further embodiment of the invention, a hinged rigid seal is used for covering the dispensing opening (11).

Claims

1. A flexible container for non-intertwined wet wipes having a substantially rectangular shape comprised by a top face (5), a bottom face (5a) and side faces (6), which short ends (2) are sealed between them; the container has a dispensing opening (11) which is formed by detaching a detaching area (4), and a flexible seal arranged so as to tightly close the container once it has been opened, **characterized by** the fact that the dispensing opening (11) is

formed by a slot which starts at a point located at the top face of the flexible container and which is projected towards one of the side faces thereof, defining a top portion (7) and a bottom portion (8) of the dispensing opening (11).

2. A flexible container according to claim 1, wherein the flexible seal (9) is substantially rectangular shaped.
3. A flexible container according to claims 1 and 2, wherein the flexible seal (9) is from the same material than the main structure (1a).
4. A flexible container according to claims 1 to 3, wherein the top flexible seal (9) comprises an opening flange (10).
5. A flexible container according to claims 1 to 4, wherein the flexible seal (9) comprises a sensing adhesive in its entire inner surface, except for the opening flange (10).
6. A flexible container according to claims 4 and 5, wherein the opening flange (10) is located at the top part of the flexible seal (9), adjacent to the top face (5) of the container.
7. A flexible container according to claims 4 and 5, wherein the opening flange (10) is located at the bottom part of the flexible seal (9), adjacent to the front face (6) of the container.
8. A flexible container according to the previous claims, wherein the flexible seal (9) surpasses the length and the width of the detaching area (4).
9. A flexible container according to the previous claims, wherein the dispensing opening (11) has a width ranging from 1 to 10 cm.
10. A flexible container according to the previous claims, wherein the top portion (7) of the dispensing opening (11) has a minimum length equal to a fifth part of the width of the top part (5) of the container when same is filled with wet wipes.
11. A flexible container according to the previous claims, wherein the bottom portion (8) of the dispensing opening (11) has a minimum length equal to a fifth part of the front face (6) of the container, when this filled with wet wipes.
12. A wet wipe comprising a substantially rectangular shape surface having a "Z" shaped fold (12c), **characterized by** the fact that it is contained in the container according to claim 1.
13. A wet wipe according to claim 12, wherein the central part of the "Z" measures between 5 and 25 cm.
14. A wet wipe according to claims 12 and 13, wherein the folds of the ends of the "Z" measure between 2 and 15 cm.

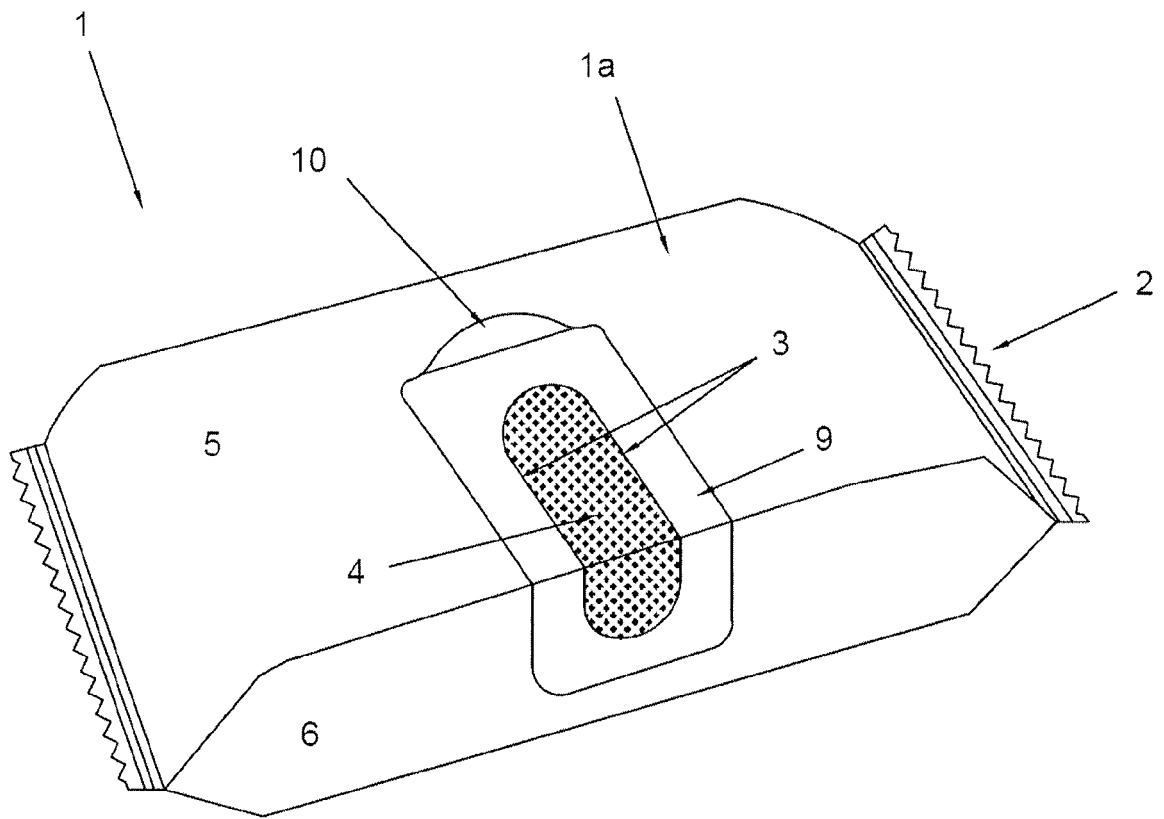


FIGURE 1

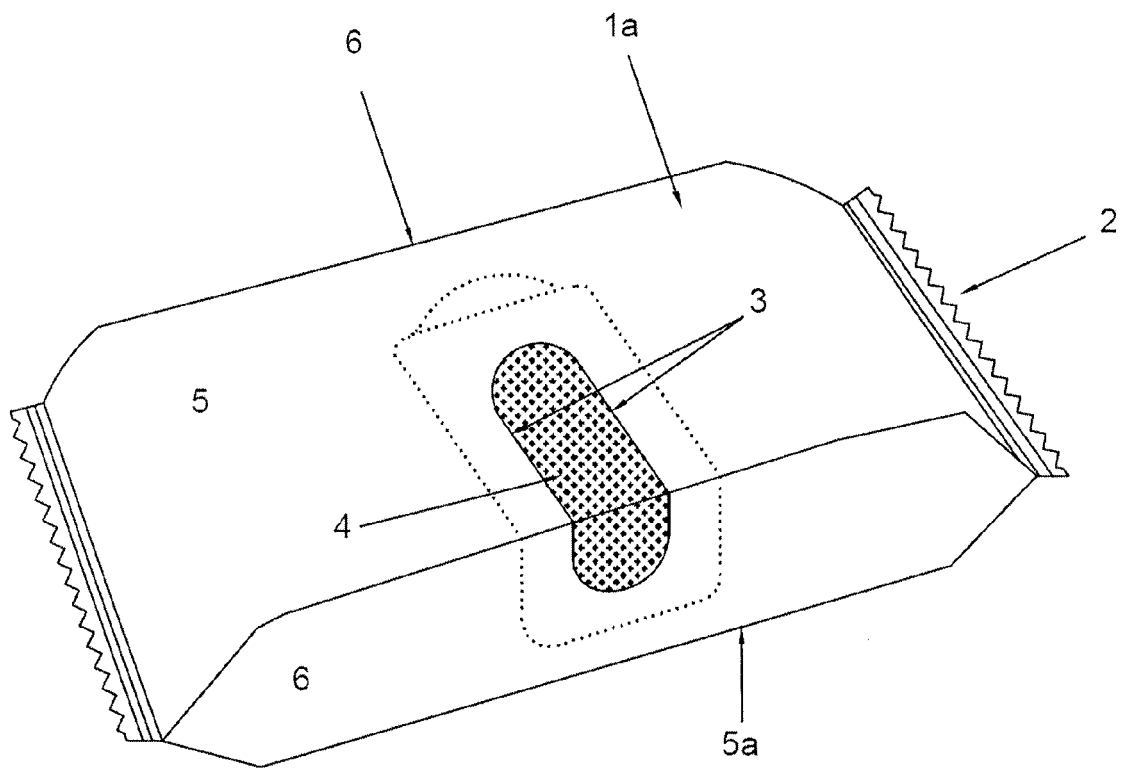


FIGURE 2

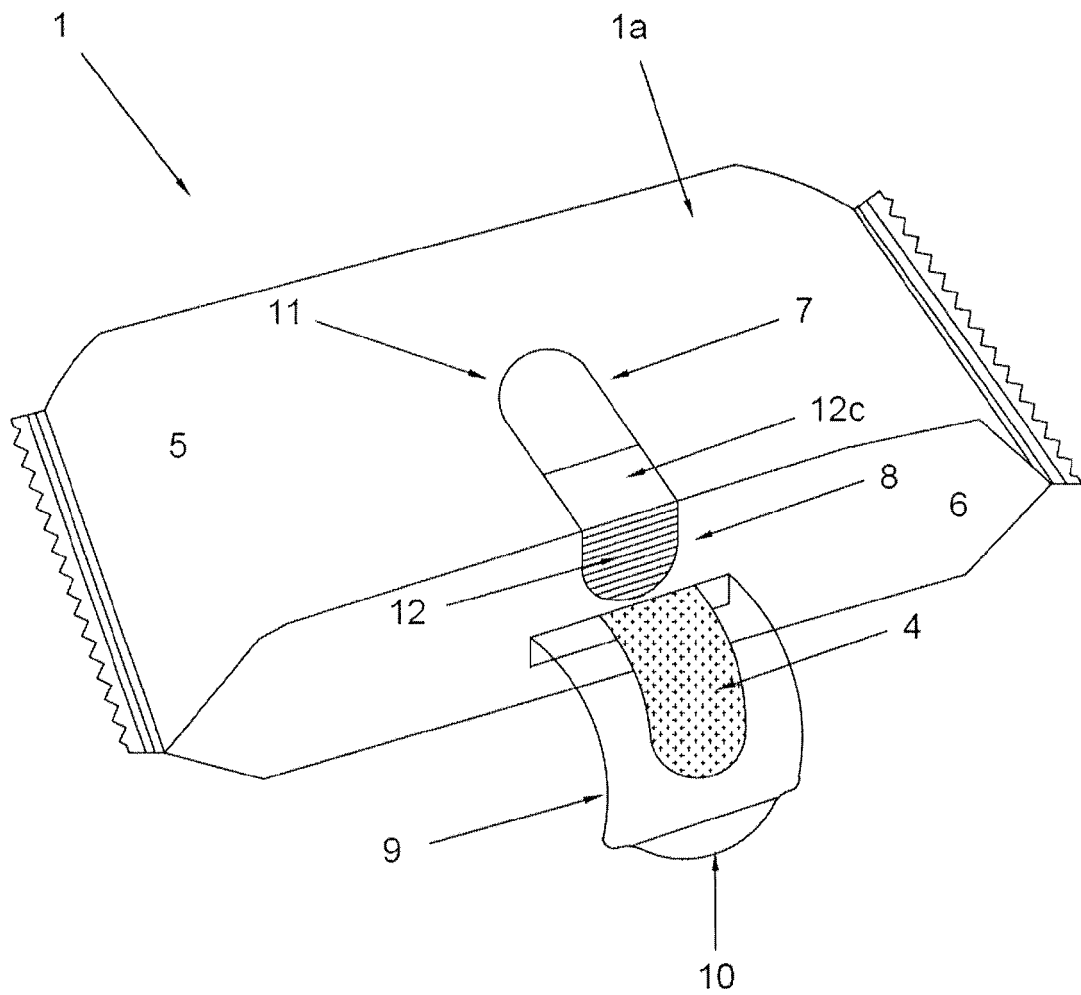


FIGURE 3

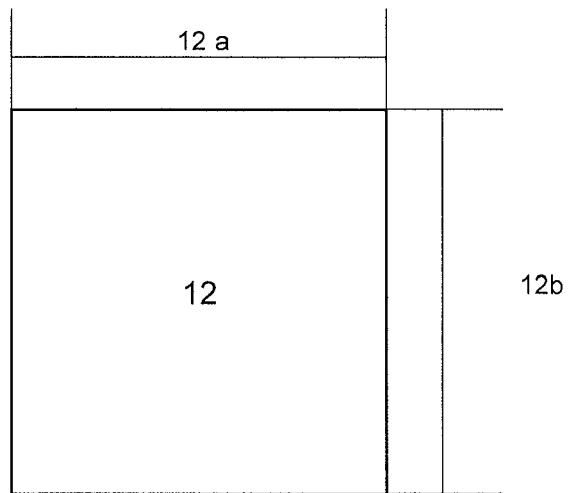


FIGURE 4

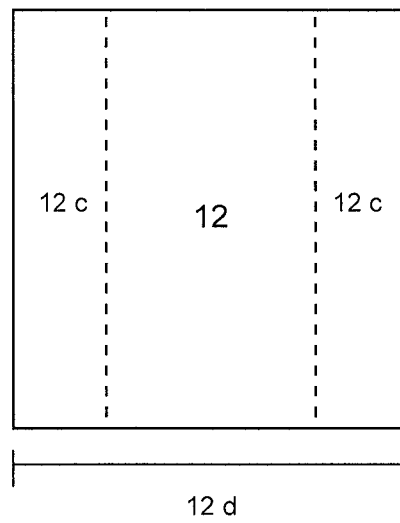


FIGURE 5



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Application Number
EP 14 18 9588

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Place of search		Date of completion of the search	Examiner
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