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(54) Easy-opening, reclosable flexible container

(57) A flexible container of the pouch type made of a film material, of the type derived from a shaped tubular body (12) formed by a film with a longitudinal heat-seal (14) and by transverse heat-seals (13) of the two ends. At least one corner region (16) of the container (10) has a tear notch (17) that produces, by pulling, the tearing of a portion (18) of the film that comprises a part of the transverse heat-seal (13) and a part of the tubular wall (15), freeing a corresponding flap (15b) of wall that is provided at least partially internally with low-stickiness adhesive (21) protected by a removable film (24). The flap (15b) can be folded back onto the remaining portion of the container (10) so as to close it by temporary sticking.

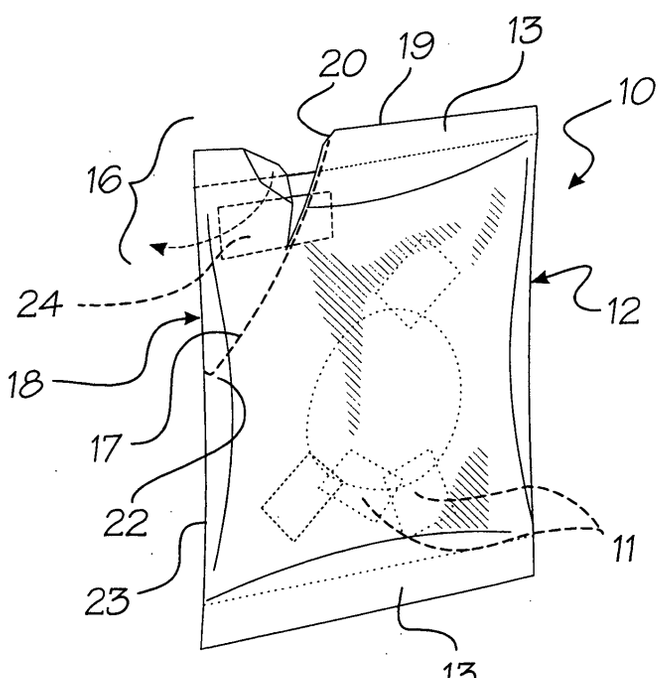

Fig. 2

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Description

[0001] The present invention relates to a flexible container of the pouch type made of material in film form.

[0002] The container is particularly but not exclusively suitable for containing food products such as candies, chocolates, confectionery, et cetera.

[0003] It can in fact be used also to contain other kinds of products, including non-food products.

[0004] As is known, the flexible containers of many food products, both packaged individually (like candies and chocolates) and unpackaged (certain kinds of confectionery, but also certain kinds of candies and chocolates) are made of material in film form, for example polypropylene, and are derived from a tubular element that is shaped appropriately and forms front faces and sides with folds, formed by means of a longitudinal heat-seal and by transverse heat-seals of the two ends.

[0005] Because of their shape, these containers are commonly known as "pouch" containers.

[0006] Actual packaging occurs by mating and heat-sealing two flaps of the film so as to form a continuous tubular element which, filled with the product to be preserved, is heat-sealed transversely and cut appropriately so as to separate the leading heat-seal of one container from the trailing heat-seal of the next container.

[0007] Such flexible containers must be produced so that the user can open them, and this operation must be as simple and effective as possible.

[0008] Sometimes it is in fact necessary to force the package because it is not possible to open it with a simple operation.

[0009] Moreover, it is desirable that the container does not open completely but opens only partially, so that the user, for example, can extract only some of the products and the container can continue to perform its containment functions.

[0010] In this regard, the need is felt to be able to reclose the container so as to prevent loss of its contents.

[0011] The aim of the present invention is to provide a pouch-type flexible container, provided starting from a film by means of heat-seals for preserving products, which can be opened easily, and then reclosed in order to retain inside it the unused products.

[0012] An object of the present invention is to provide an easy-opening, reclosable flexible container that can be manufactured with automated systems.

[0013] Another object of the present invention is to provide an easy-opening reclosable flexible container that can be manufactured with low production costs.

[0014] This aim and these and other objects that will become better apparent hereinafter are achieved by a flexible container of the type derived from a shaped tubular body formed by a film with a longitudinal heat-seal and by transverse heat-seals of the two ends, said container being characterized in that at least one comer region thereof has, at its transverse edge in the region of said transverse heat-seal, a tear notch so as to produce, by pulling, the tearing of a portion of said film that comprises a part of the transverse heat-seal and a part of the tubular wall, freeing a corresponding flap of wall that is provided at least partially internally with low-stickiness adhesive protected by a removable film, said flap being foldable back onto the remaining portion of the container so as to close it by temporary sticking.

[0015] Further characteristics and advantages of the invention will become better apparent from the following detailed description of two embodiments thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a container according to the invention in the closed configuration;
Figure 2 is a perspective view of the container of Figure 1 during opening;
Figure 3 is a perspective view of the upper part of the container of Figure 1 in the open condition;
Figure 4 is a perspective view of the upper part of the container of Figure 1 in the open condition and during reclosing;
Figure 5 is a perspective view of the upper part of the container of Figure 1 in the reclosed condition;
Figure 6 is a sectional view of the container in the configuration of Figure 1;
Figure 7 is a sectional view of the container in the configuration of Figure 5.

[0016] With reference to the figures, an easy-opening reclosable flexible container is generally designated by the reference numeral 10 and is obtained starting from a film that forms a tubular body 12, inside which products 11 are accommodated; transverse heat-seals 13 are provided on said tubular body at the two ends.

[0017] The film, which is generally wound in rolls, is unrolled and folded so as to form a continuous tubular body by means of a longitudinal heat-seal 14; transverse heat-seals 13 and cuts then form the body 12, which has two facing walls 15.

[0018] The longitudinal heat-seal 14 is provided substantially at the longitudinal central region in this case of a wall 15, so as to form an external fin.

[0019] A corner region 16 can have a tear line 17 that is shaped so as to tear, by pulling, a portion 18 of said film that comprises a part 13a of the transverse heat-seal 13 and a part 15a of the tubular wall 15, releasing a corresponding flap of wall 15b.

[0020] The line 17 therefore lies diagonally at a wall 15 and follows the corresponding side 23 and the inner region of the wall 15 that is adjacent to the heat-seal 13.

[0021] For this purpose, at the transverse edge 19 of the container 10, at the beginning of the line 17 in the region of the transverse heat-seal 13, there is a tear notch 20.

[0022] On the opposite side, at a region 22 that is adjacent to a side 23, the two walls 15 are heat-sealed locally so as to constitute a retention element for inter-

rupting the fracture formed by the line 17.

[0023] The flap of wall 15b is provided at least partially internally with low-stickiness adhesive 21 protected by a removable film 24.

[0024] The expression "low-stickiness adhesive" is used to designate an adhesive that allows to join and separate two surfaces several times before losing its adhesive effect.

[0025] The flap 15b can be folded conveniently back onto the remaining portion of the container 10 so as to close it by temporary gluing, as shown in Figure 5.

[0026] At this point it should be noted that the presence of the tear line 17 achieves an optimum result, but that the presence of the notch 20 alone, with a correct positioning of the adhesive 21 with the film 24, still achieves a good result because the tear "propagates naturally" in the direction of the notch.

[0027] In practice it has been found that the flexible container according to the invention achieves the intended aim and objects.

[0028] In particular, the flexible container according to the invention ensures easier opening for access to the products and the possibility of reclosure in order to retain inside it the unused products.

[0029] Opening and reclosing can be performed until the contained products have been used up completely.

[0030] It is also evident that the flexible container according to the invention can be produced without using particular manufacturing methods with respect to known ones.

[0031] Another advantage consists in that the flexible container according to the invention has an extremely simple constructive structure.

[0032] It is also evident that the flexible container according to the invention can be produced with an automated procedure.

[0033] Another advantage is the fact that the container according to the invention can be produced at very low production and manufacturing costs.

[0034] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0035] All the details may further be replaced with other technically equivalent elements.

[0036] In practice, the materials employed, so long as they are compatible with the contingent use, as well as the dimensions, may be any according to requirements.

[0037] The disclosures in Italian Patent Application No. PD2001A000285 from which this application claims priority are incorporated herein by reference.

[0038] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A flexible container of the type derived from a shaped tubular body (12) formed by a film with a longitudinal heat-seal (14) and by transverse heat-seals (13) of the two ends, the container being **characterized in that** at least one comer region (16) thereof has, at its transverse edge (19) in the region of said transverse heat-seal (13), a tear notch (20) so as to produce, by pulling, the tearing of a portion (18) of said film (24) that comprises a part (13a) of the transverse heat-seal (13) and a part (15a) of the tubular wall (15), freeing a corresponding flap (15b) of wall that is provided at least partially internally with low-stickiness adhesive (21) protected by a removable film (24), said flap (15b) being foldable back onto the remaining portion of the container (10) so as to close it by temporary sticking.

2. The container according to claim 1, **characterized in that** it comprises a tear line (17) that starts from said tear notch (20) and extends over a part (13a) of a transverse heat-seal (13) and a part of the tubular wall (15).

3. The container according to claim 2, **characterized in that** said tear line (17) lies diagonally at a wall (15) and follows the corresponding side (23) and the inner region of the wall (15) that is adjacent to the corresponding transverse heat-seal (13).

4. The container according to claim 3, **characterized in that** at a region (22) that is adjacent to a side, on the opposite side with respect to said tear notch (20), the two walls (15) of said container (10) are heat-sealed locally so as to constitute a retention element for interrupting the tear formed by said line (17).

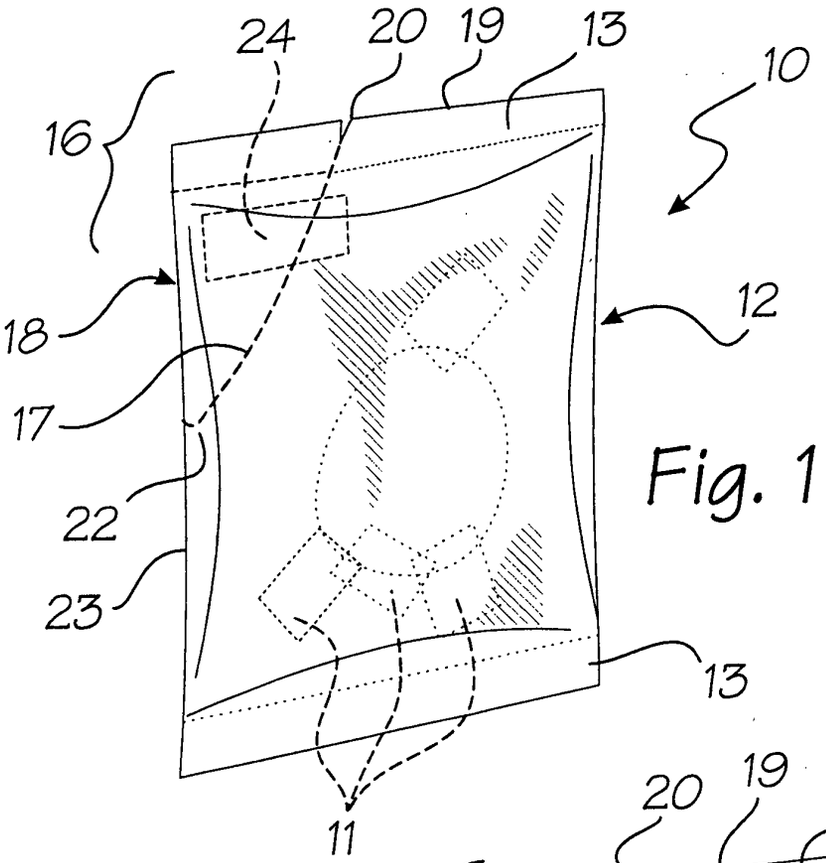
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Fig. 1

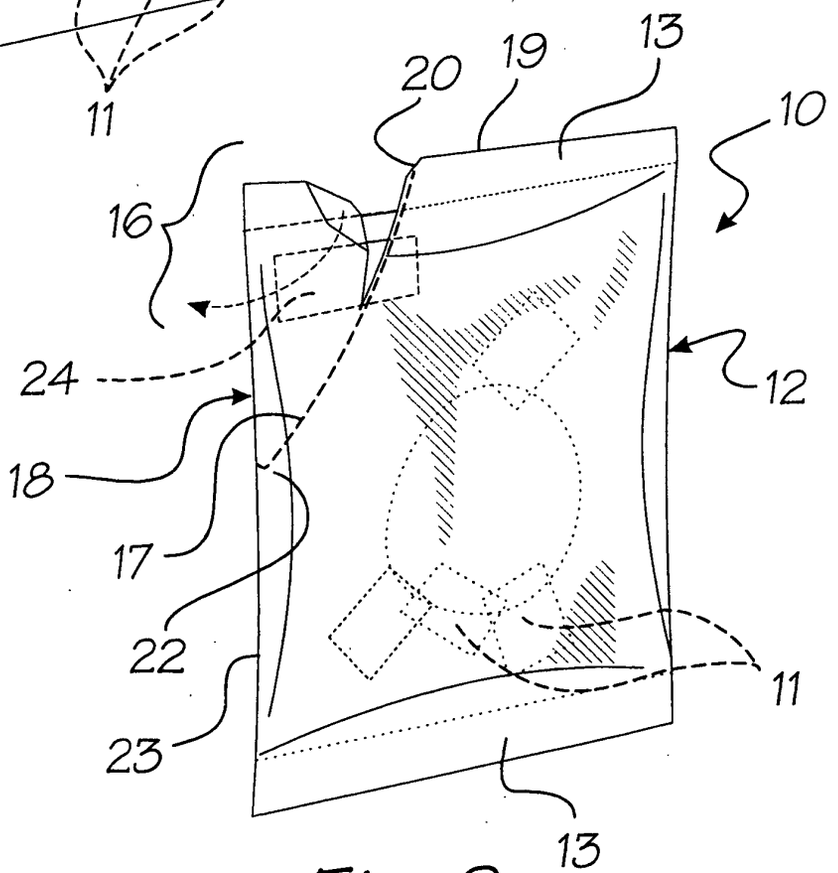
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Fig. 2

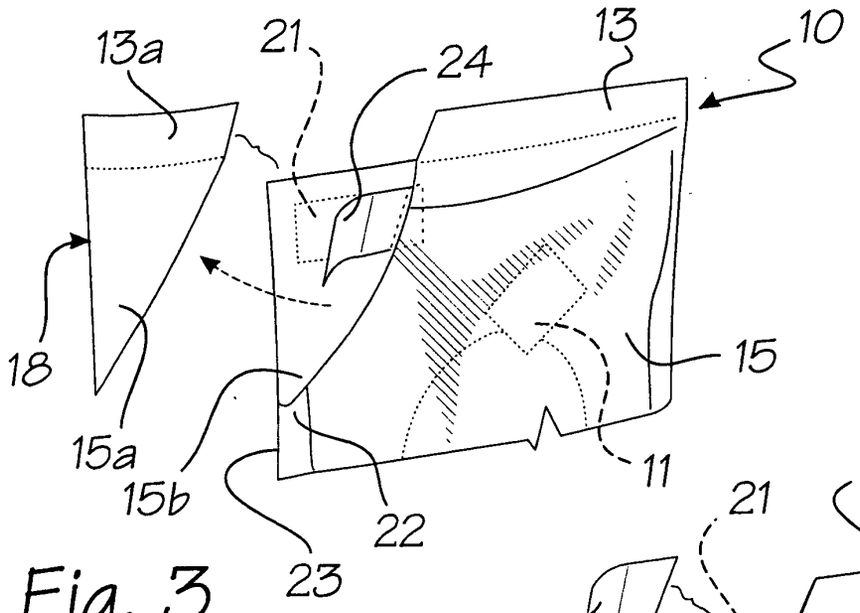

Fig. 3

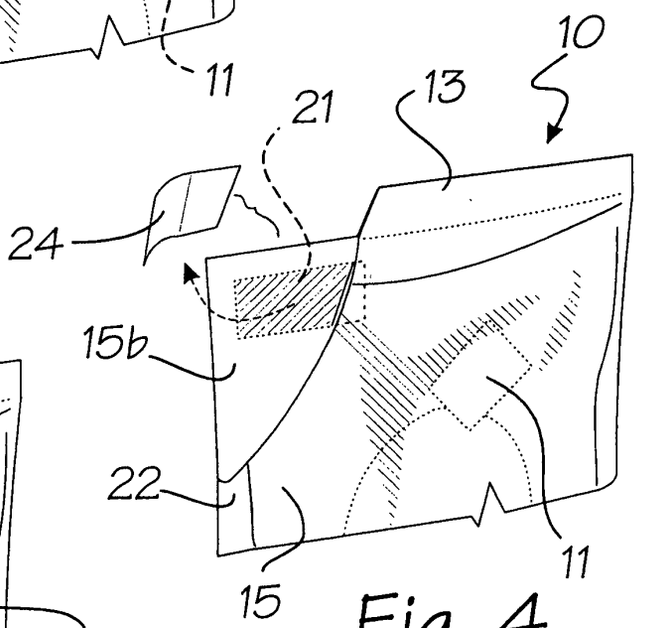

Fig. 4

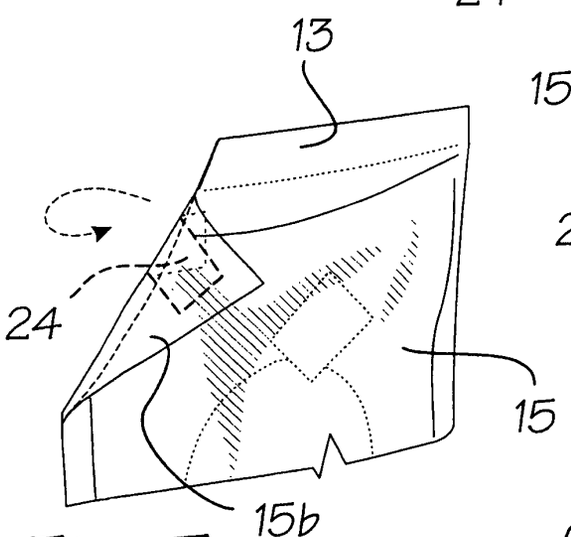

Fig. 5

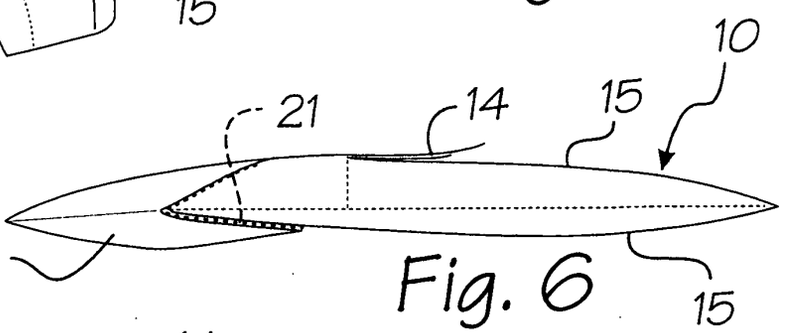

Fig. 6

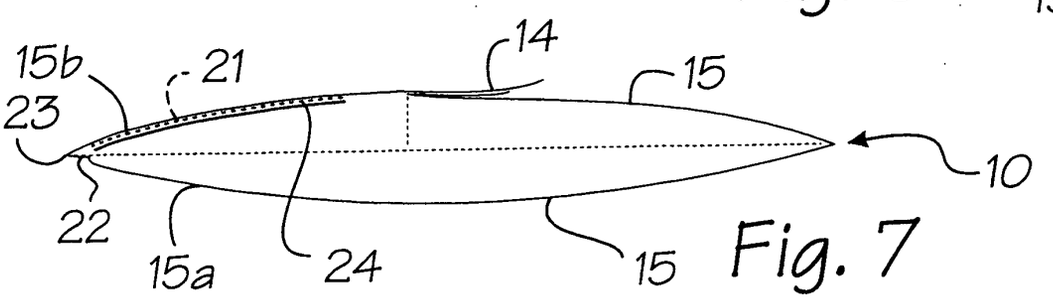

Fig. 7