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(54) RECLOSABLE BAG

(57) Flexible package (1) of the bag type for loosely packaged perishable food products, comprising: a front wall (2) and a rear wall (3) situated opposite each other, defining on the upper part a closing fin (4) and laterally connected together by two gusset walls (5); and a reclosing insert (10) comprising an attachment portion (7), externally adhering to said rear wall (3), and a non-adhesive free portion (8), contiguous to said attachment portion (7) and defining between itself and the rear wall (3) an insertion space (6) open at the top; said free portion (8) being able to retain, in a reclosing configuration, a folded-over portion of said closing fin (4) within said insertion space (6).

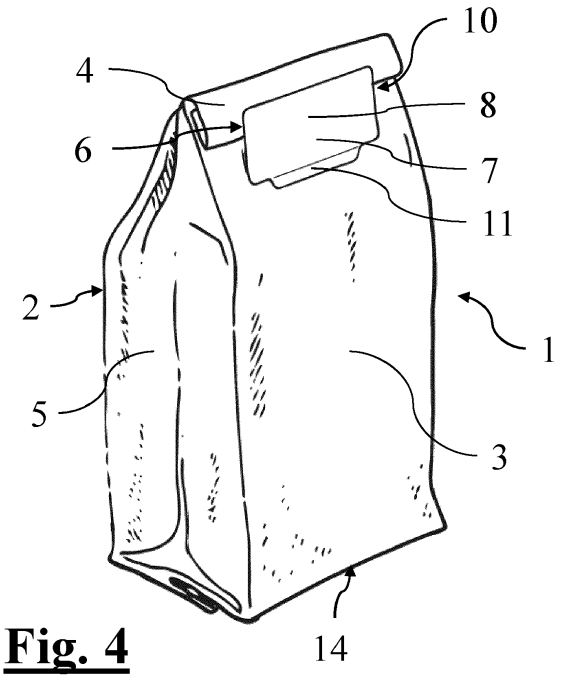

Fig. 4

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Description

Field of application

[0001] The present invention relates, according to its more general aspect, to a flexible packaging of the bag type, in particular but not exclusively suitable for perishable food products, such as oven-baked products, in particular biscuits, and the like.

[0002] The invention may therefore have a useful application in the packaging sector, in particular in the food packaging sector.

Prior art

[0003] It is known that one of the main requirements in the sector for the production and distribution of perishable foods is that of providing a packaging which is able to maximize the shelf life, namely prolong the period during which conservation of the original organoleptic properties of the packaged foods may be reasonably ensured.

[0004] For this purpose, suitable paper or plastic materials for manufacture of the packaging, along with suitably shaped containers and suitable methods for sealing them once filled with the required products, have been designed, tested and made available.

[0005] With regard to oven-baked food products, such as shortbread biscuits and the like, which are generally packaged loose in bag-type packaging and which are eaten gradually over time, along with the aforementioned requirement there is also the problem of ensuring a certain degree of protection for the product which remains following opening of the packaging.

[0006] For this purpose, bag-type packages provided with structural devices or systems designed to allow temporary reclosing of the said package, following peeling, tearing or cutting of the top fin necessary for accessing the products, have been designed and made available.

[0007] The main most widely used reclosing system of this kind is the self-adhesive label; it is used to fix a top part of the front and rear walls of the bag-type packaging, which comprise the inlet opening thereof, in a condition folded over several times onto itself.

[0008] A bag-type package provided with a self-adhesive reclosing label is described, for example, in European Patent EP 0 677 832 B1 in the name of the Applicant.

[0009] However, it is known that self-adhesive labels allow efficient reclosing only a limited number of times owing to the rapid deterioration of their adhesive properties and the fact that they are used in the presence of grease, crumbs and other contaminating agents.

[0010] Among the various alternative reclosing systems which have been proposed in the prior art, none of them has proved to be a commercially viable alternative to the self-adhesive label for bag-type packages of the type considered in the present invention. These alternative systems in fact have various drawbacks which today remain unsolved, including a relatively high production cost, a system which is not easy to use and, in some cases, a closing efficiency which is in any case limited over time.

Summary of the invention

[0011] The problem underlying the present invention is that of providing a flexible package of the bag type provided with a reclosing device which overcomes, in a simple and low-cost manner, all the drawbacks mentioned with respect to the prior art: in particular a bag in which the reclosing device guarantees always, i.e. an indefinite number of times, the same efficient reclosing action while ensuring low production costs.

[0012] This problem is solved, according to the present invention, by a flexible package of the bag type for loosely packaged perishable food products, comprising: a front wall and a rear wall situated opposite each other, defining on the upper part a closing fin and laterally connected together by two gusset walls; and a reclosing insert comprising an attachment portion, externally adhering to said rear wall, and a non-adhesive free portion - or tongue - contiguous to said attachment portion and defining between itself and the rear wall an insertion space open at the top; said free portion being able to retain, in a reclosing configuration, a folded-over portion of said closing fin within said insertion space.

[0013] As the person skilled in the art will recognize, the configuration proposed above defines advantageously a reclosing device which, on the one hand, is reliable over time, since it does not use detachable adhesives, the adhesive properties of which may deteriorate after repeated reclosing; on the other hand, it is relatively low-cost since it is defined by a single element with a simple form which may be associated with the already sealed package by means of a single operation at the end of the production line, differently from mechanical solutions which involve two connecting elements mounted on the opposite walls of the package.

[0014] Preferably, the reclosing insert is a rigid planar element. Obviously the rigidity of the element does not have to be absolute, it being sufficient to ensure a resistance of the planar insert such as to keep the folded closing fin in position once it is inserted underneath the free portion. In this connection, the adjective "rigid" must be understood as being the opposite of "floppy" and not the opposite of "flexible" or "elastic". A certain degree of flexibility of the reclosing insert is on the contrary preferable in order to facilitate the operations involving insertion and extraction of the closing fin underneath the free portion.

[0015] Said reclosing insert preferably consists of a sheet of thin cardboard or material with a similar consistency, possibly of the paper recyclable type. Alternatively, it is possible to make the reclosing insert using other materials as well, for example plastic material.

[0016] The attachment portion is preferably glued onto the outer surface of the rear wall, said free portion being

instead without adhesive. Other methods for fixing the attachment portion, which are known to the person skilled in the art, may in any case be considered.

[0017] In order to ensure that the reclosing insert remains fixed to the rest of the package and prevent the risk of breakage or tearing, the attachment portion has an extension - namely a surface for attachment to the package - preferably equal to a quarter of the total extension of the reclosing insert. Even more preferably, the attachment portion has an extension equal to at least half the total extension of the reclosing insert.

[0018] The reclosing insert has preferably a substantially rectangular profile which is subdivided horizontally into an attachment portion and a free portion. The attachment portion may also optionally have a lower skirt, for example with a trapezoidal shape, which is smaller in size than the rest of the substantially rectangular profile, so as to improve the adhesion to the outer surface of the rear wall.

[0019] The upper edge of the reclosing element, in a shelf configuration, is preferably downwardly displaced with respect to the upper edge of the closing fin. In this way, the user is able to unseal easily the closing fin and duly fold it over.

[0020] It is pointed out that the walls of the flexible package according to the present invention are preferably made of paper-like material, but obviously the use of another material - for example plastic - is possible provided that it allows the flexibility needed to fold over the packaging during operation of the reclosing device described above. It is therefore possible to have a package which is made entirely of plastic material.

[0021] The aforementioned closing fin, which in the shelf configuration is sealed - preferably by means of heat-sealing - may be conveniently unsealed, or else cut, by the user so as to define a mouth for accessing the product.

[0022] In order to reclose the package, the user may therefore fold over at least twice, along a first folding axis and a second folding axis situated parallel to and below the first axis, said closing fin against the rear wall so as to close said access mouth, and then insert the resulting closing fin which has been folded over several times inside the insertion space below the free portion, so as to ensure provisional reclosing.

[0023] The advantages and characteristic features of the flexible package according to the present invention will energy more clearly from the description of an example of embodiment thereof provided hereinbelow with reference to the attached drawings provided by way of a nonlimiting example.

Brief description of the drawings

[0024]

Figure 1 shows in schematic form a perspective view of a bag-type package according to the present invention in a shelf configuration.

Figure 2 shows in schematic form a process for opening the bag-type package according to Figure 1.

Figure 3 shows in schematic form a process for reclosing the bag-type package according to Figure 1.

Figure 4 shows in schematic form the bag-type package according to Figure 1 in the reclosed configuration.

Detailed description of a preferred embodiment

[0025] With reference to the attached Figures 1-4, 1 denotes overall a flexible bag-type package for perishable food products, in particular for oven-baked products such as shortbread biscuits and the like, which are loosely packaged.

[0026] The position references used in the present description, comprising indications such as "front" or "rear", "in front of" or "behind", "upper" or "lower", "above" or "below", "laterally" or similar terms, in all cases refer to the illustrative configuration shown in the aforementioned figures and must not in any case be attributed any limiting value.

[0027] With particular reference to the terms "front" or "rear" it is pointed out that these are used mainly for the sake of easier description and, although they suggest a preferred orientation of the package on the shelf of the distribution outlet, they must not be regarded as having a limiting meaning. In particular, it is possible for the side described here as "rear" to be printed or otherwise decorated with brand markings and/or pictures of the product such that it may be placed on display so as to face the consumers.

[0028] The flexible package 1, which is referred to below simply as "package", has a substantially parallelepiped form with a front wall 2 and rear wall 3, opposite and identical to each other, and gusset walls 5 which laterally connect said front and rear walls. The front wall 2 and rear wall 3 are joined together at the top in the form of a closing fin 4 where the two top edge zones of these walls are heat-sealed or in any case sealed using a suitable method. At the bottom, the package 1 has a support base 14 which may be defined by a suitably folded bottom fin or in any other manner known to the person skilled in the art.

[0029] Preferably, the walls 2, 3, 5 and the support base 14 are all made of paper-like material, i.e. paper, cardboard or other material which can be recycled together with paper. Alternatively, other materials, for example plastic materials, may be used, provided obviously that they do not adversely affect the flexibility of the walls where necessary for the reclosing operations described below.

[0030] The aforementioned closing fin 4, in a manner known per se, may be unsealed or in any case torn along

the seal, so as to define a mouth 9 for accessing the products - in the preferred example oven-baked products such as biscuits - contained inside the package 1.

[0031] The package 1 also comprises an insert 10 for reclosing the aforementioned access mouth 9, which may be used by the end user to close said mouth following initial opening of the package 1.

[0032] This reclosing insert 10 is in the form of a planar element, preferably made of rigid cardboard or other material with a sufficient rigidity which is fixed - by means of gluing or some other system suitable for the prechosen material - to the rear wall 3 of the package 1.

[0033] The reclosing insert 10, in the preferred embodiment described here, has a rectangular profile, with a lower trapezoidal skirt 11 extending transversely with respect to the rectangular profile situated above it. In the context of the present invention it is obviously possible to envisage reclosing inserts 10 which have a different shape both for functional requirements and for merely aesthetic and/or commercial reasons.

[0034] The reclosing insert 10 is fixed only partially to the rear wall 3: in particular only a lower portion of the reclosing insert 10, identified here as attachment portion 7, adheres to the surface of the rear wall. The upper portion defines instead a free portion 8 which may be moved away from the outer surface of the rear wall 3 in order to free an insertion space 6 which is directed upwards.

[0035] Preferably, the attachment portion 7 and the free portion 8 are subdivided vertically: in the present case of a rectangular form of the reclosing insert 10, the upper portion of the rectangle defines the free portion 8.

[0036] The attachment area, namely the extension of the attachment portion 7, is sufficiently large with respect to the totally surface area of the reclosing insert 10: in the preferred embodiment described here it is equal to half the total surface area.

[0037] Finally it is pointed out that the reclosing insert 10 is fixed so as to be spaced from the upper edge of the respective rear wall 3, in order to allow the folding-over operations described below. As regards instead the position along the horizontal axis, the reclosing insert 10 is preferably arranged in a middle position, namely equidistant from the two lateral gusset walls 5.

[0038] In a shelf configuration, namely in the configuration following packaging and prior to opening by the end user, the package 1 has the form shown in Figure 1. In this configuration, the closing fin 4 - the top seal of which is still intact - is arranged vertically erect; in any case it is also possible to envisage that the closing fin 4 is already presented in the folded-over configuration so as to suggest to the user the correct reclosing process.

[0039] The reclosing insert 10 is in this configuration arranged against the rear wall 3 even though the free portion 8 may be separated from this wall.

[0040] The operating principle of the package 1 with reclosing device according to the invention is already clear to the reader and is described in detail below, with particular reference to Figures 2-4.

[0041] Figure 2 shows opening of the package 1 by the end user. During this step the closing fin 4 is unsealed in order to free the access mouth 9 and thus allow the user to reach the product. The configuration thus obtained is the open configuration of the package 1.

[0042] Figure 3 shows a first step of the reclosing process in which the closing fin 4 is folded over along the rear wall 3 along a first folding line "x" parallel to the upper edge, so as to close the access mouth 9 and is then folded over again along a second folding line "y" situated parallel to and below the first axis, so as to define a closing fin 4 which is folded over twice.

[0043] During the last step of the folding process, the closing fin 4 which has been folded over twice is introduced into the previously defined insertion space 6 where it is mechanically retained by the free portion 8. The reclosing configuration thus achieved is shown in Figure 4.

[0044] From this reclosing configuration it is obviously possible to obtain the open configuration of the package 1 by extracting and then unfolding the closing fin 4 so as to free the access mouth 9.

[0045] It should be noted that, during the packaging operations, the reclosing insert 10 is preferably applied after formation, filling and closing of the package 1. These operations may therefore advantageously be performed using a conventional packaging line which must not be substantially modified, other than in order to integrate downstream, where needed, a further station for applying the reclosing insert 10.

[0046] The main advantage achieved by the package according to the present invention is that of allowing practical, rapid and efficient reclosing of the said package, which may be repeated a significantly greater number of times than that which is possible with the prior art, while ensuring relatively low production costs.

[0047] The flexible package with reclosing device, in particular for perishable food products, described above may be subject to other variants and modifications, all of which are within the scope of the persons skilled in the art and, as such, fall within the scope of protection defined by the following claims.

Claims

1. Flexible package (1) of the bag type for loosely packaged perishable food products, comprising: a front wall (2) and a rear wall (3) situated opposite each other, defining on the upper part a closing fin (4) and laterally connected together by two gusset walls (5); and a reclosing insert (10) comprising an attachment portion (7), externally adhering to said rear wall (3), and a non-adhesive free portion (8), contiguous to said attachment portion (7) and defining between itself and the rear wall (3) an insertion space (6) open at the top; said free portion (8) being adapted to retain, in a reclosing configuration, a folded-over portion of said closing fin (4) within said insertion space

(6).

2. Package (1) according to claim 1, wherein said reclosing insert (10) is a rigid planar element.

3. Package (1) according to claim 2, wherein said reclosing insert (10) is a cardboard sheet.

4. Package (1) according to claim 2, wherein said reclosing insert (10) is made of plastic material.

5. Package (1) according to one of claims 2-4, wherein said attachment portion (7) is glued onto the outer surface of the rear wall (3), said free portion (8) being instead without adhesive.

6. Package (1) according to claim 5, wherein said attachment portion (7) has an extension which is at least equal to one fourth of the overall extension of the reclosing insert (10).

7. Package (1) according to one of claims 3-6, wherein said reclosing insert (10) has a substantially rectangular profile, which is horizontally subdivided into an attachment portion (7) and a free portion (8).

8. Package (1) according to claim 7, wherein the attachment portion (7) has a lower skirt (11) which is smaller in size than the rest of the substantially rectangular profile, so as to improve the adhesion to the outer surface of the rear wall (3).

9. Package (1) according to one of the preceding claims, wherein the upper edge of the reclosing insert (10), in a shelf configuration, is downwardly displaced with respect to the upper edge of the closing fin (4).

10. Package (1) according to one of the preceding claims, wherein the walls (2, 3, 5) are made of paper material.

11. Package (1) according to one of claims 1-9, wherein the walls (2, 3, 5) are made of plastic material.

12. Method for reclosing a flexible package (1) according to one of the preceding claims, comprising, following opening of the closing fin (4) so as to define an upper mouth (9) for access to the products, the steps of:

- folding-over at least twice said closing fin (4) against the rear wall (3) along a first folding axis (x) and a second folding axis (y) which is parallel to and below the first axis;
- inserting the resulting closing fin (4), which is folded-over at least twice, into the insertion space (6) under the free portion (8).

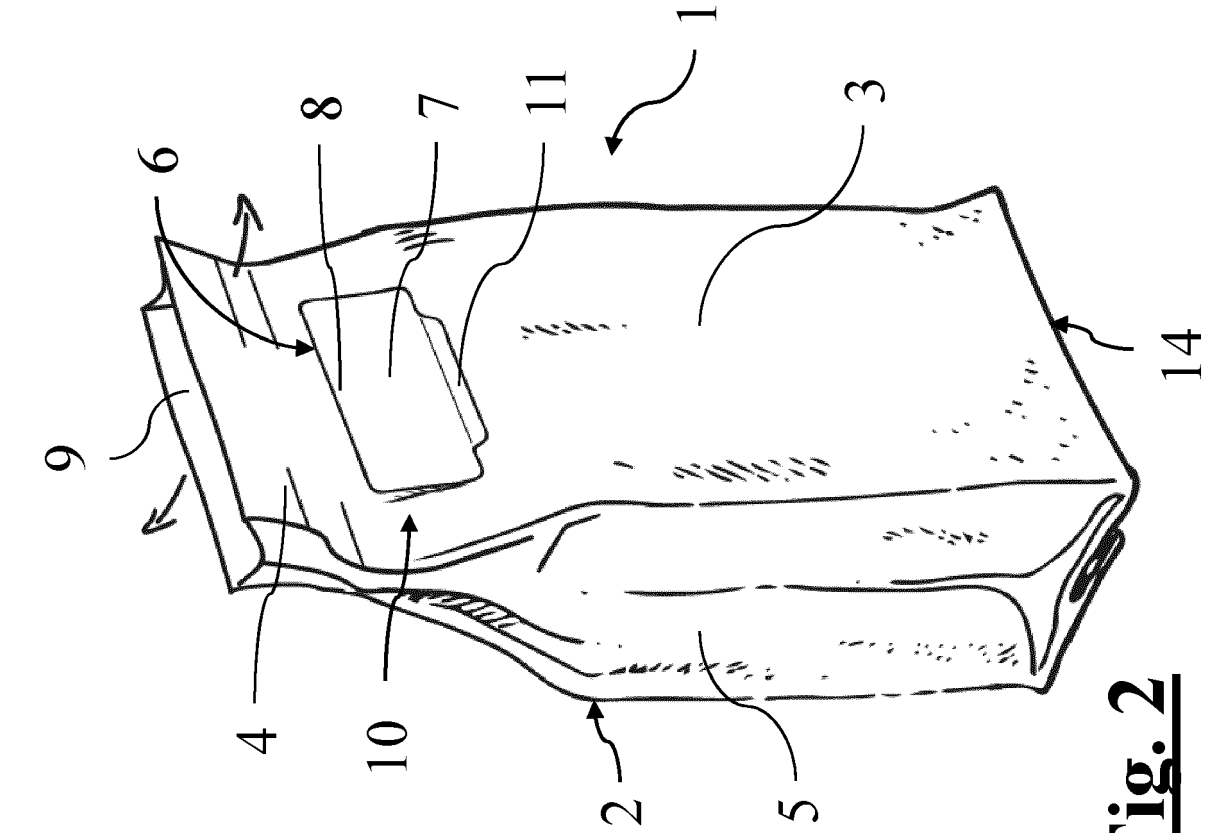

Fig. 2

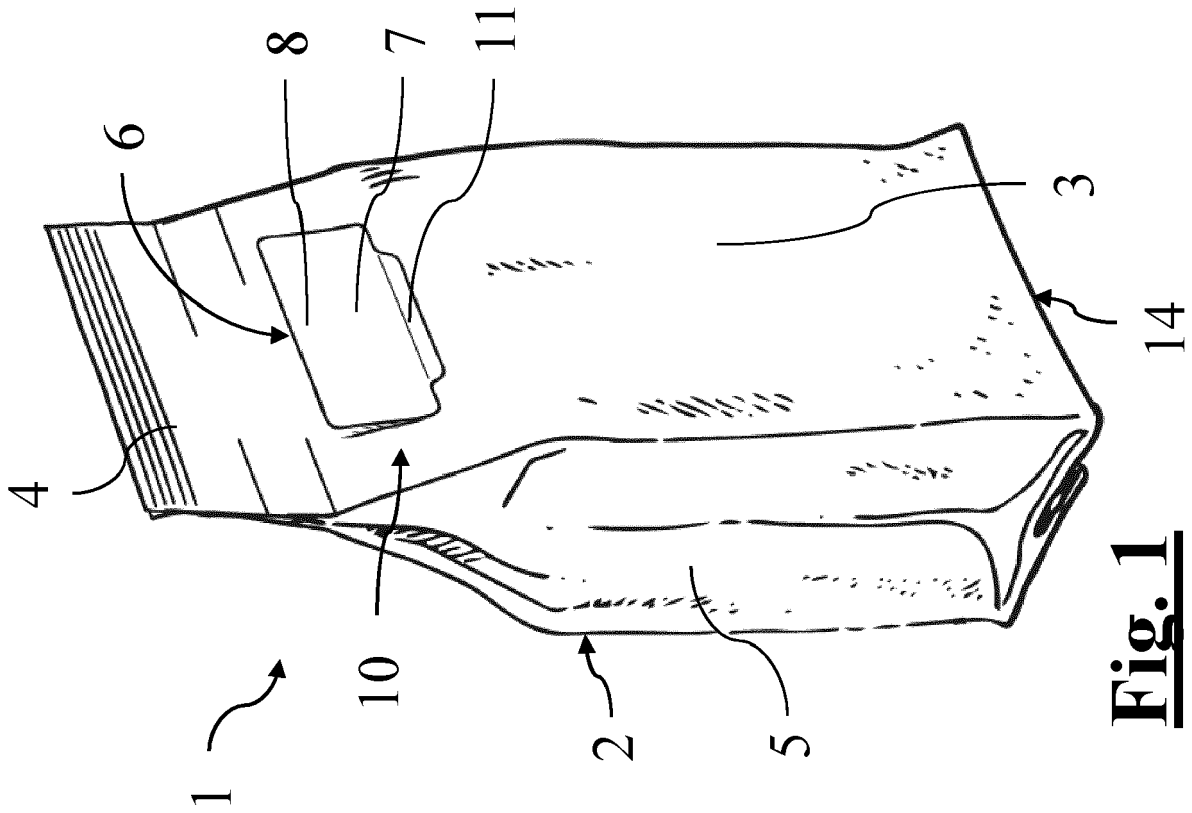

Fig. 1

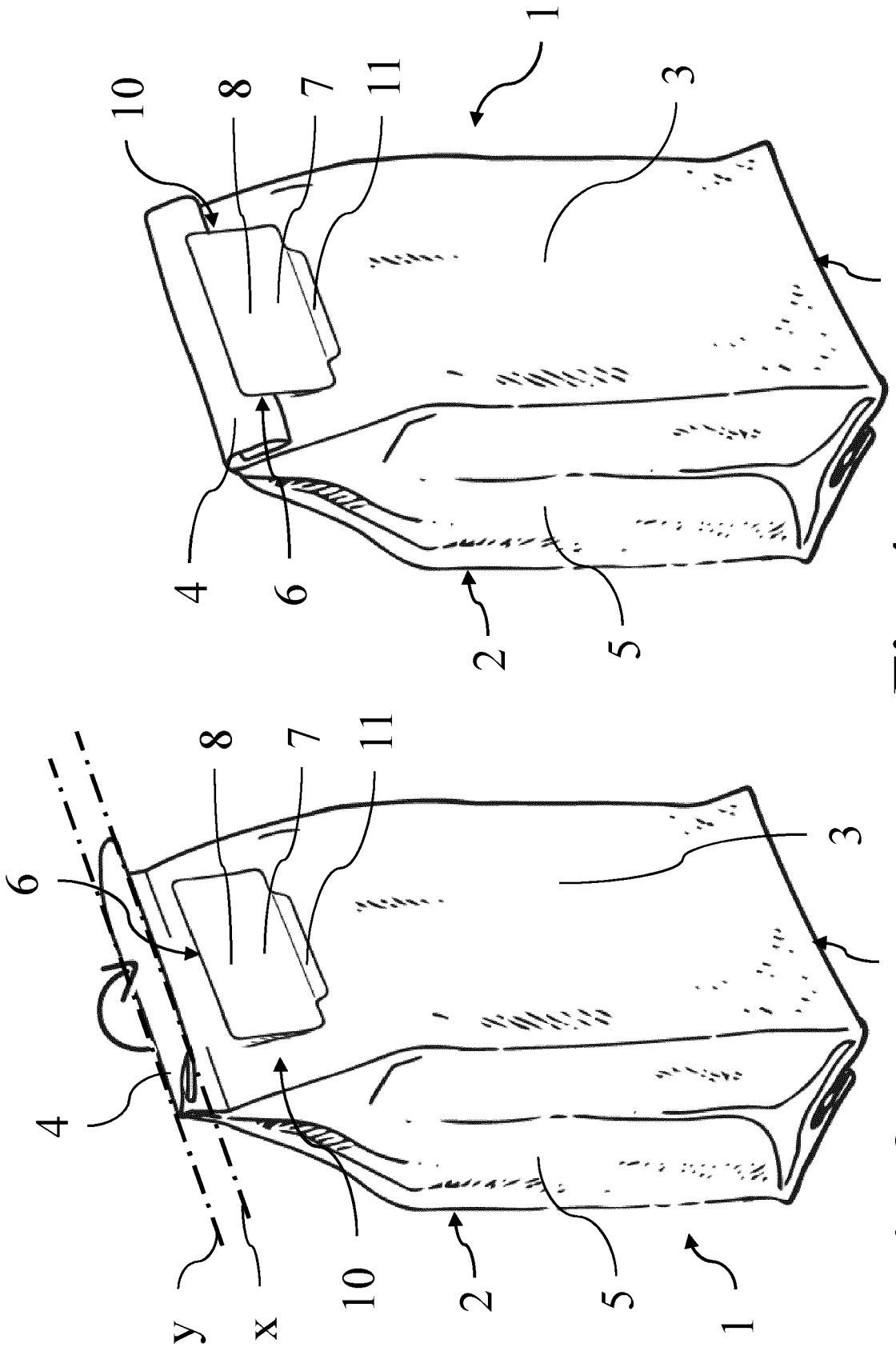

Fig. 4

Fig. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 18 20 4910

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	7 January 2019	Leijten, René

CATEGORY OF CITED DOCUMENTS

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