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(54) Title: RECLOSABLE BAG MADE OF A PAPER-PLASTIC LAMINATE

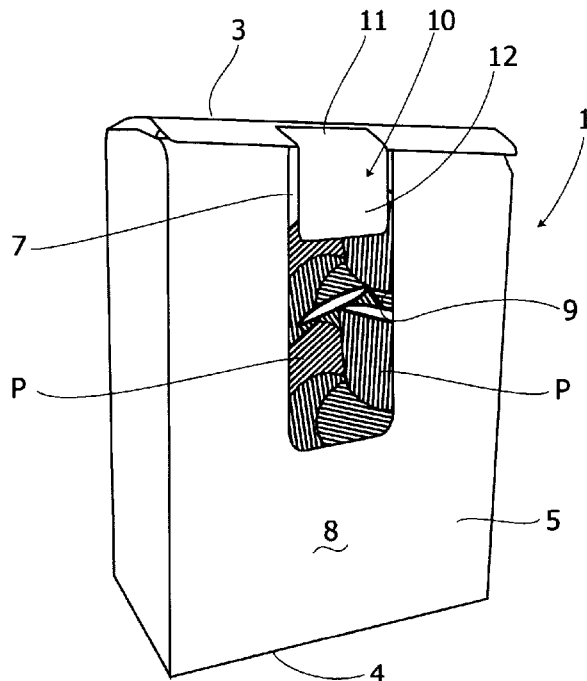


Fig. 2

(57) Abstract: A reclosable bag (1) made of a paper-plastic laminate, having a rear side (8) and upper and lower heat-sealed edges (3, 4), comprises an external layer (5) made of paper and an inner polymeric lining film (7). A rear window (9) closed by the inner polymeric lining film (7) is formed in the external paper layer (5) on the rear side (8) of the bag (1). An easy open adhesive label (10) is permanently attached through a first portion (11) thereof on the external paper layer (5) of the upper edge (3) of the bag (1), and through a second portion (12) thereof releasably on the internal polymeric lining film (7) that closes the rear window (9).

RECLOSABLE BAG MADE OF A PAPER-PLASTIC LAMINATE

Technical field

The present invention relates to a reclosable bag made of paper-plastic laminate. In a
5 bag of this kind a layer of paper generally provides an external printable surface, and
the polymeric film layer gives a barrier protection.

Background art

Paper bags having an inner polymeric lining film, have existed for a long time. U.S.
patent 3,038,651 that was granted on 12 June 1962, may be mentioned by way of
10 example. Said patent describes a paper bag comprising a paper tubular outer layer
having a window therein, and a cellophane tubular inner liner attached to the outer
tubular layer by means of an adhesive. The window is closed only by the cellophane
inner liner, which allows the product contained inside the bag to be seen. The bag
has a perforation line in the vicinity of its sealed upper edge. The consumer opens
15 the bag by tearing it away along the perforation line. If the product, for example
cookies, is not consumed all at once after opening the bag, the consumer is
recommended according to the cited patent to fold the remaining upper edge so as to
tightly close the bag to reduce the possibility that the product becomes stale because
of the contact with the air.

20 The technique of obtaining in the front of the bag by appropriate die cutting at least
one window for direct vision of the product when the bag is, for example, exposed
to the public on the shelf of a store, is already well known from the above mentioned
Patent U.S. 3,038,651 and widely spread in the distribution. All these bags have the
same problem of not being able to be reliably sealed after the first opening and a
25 partial consumption of the contents.

Also food bags, which are normally used to contain a sealed dry pasta, are very
widespread in the distribution of goods; such food bags are constituted by a single
polymeric generally transparent tubular layer, for example made of polypropylene,
partially printed with the name, the characteristics of the contained product and
30 more. The bag is heat sealed to the upper and lower edges. An easy open removable
adhesive label is attached in many cases on the upper edges, that the consumer has

to tear or cut to get to the contents. This adhesive label must be removed to open the bag and attached again to join the upper edges of the bag with a side of the latter: this allows the bag to be closed after removal of a part of its contents, the remaining part thereof being preserved from moisture and other external factors and prevented to spill out of the bag.

The use of an easy open adhesive label has not been hitherto possible to the bags having at least two layers, that are paper or similar material on the outside and an inside polymeric layer. In fact, if doing so, at the first removal of the adhesive label in order to open the bag, part of the paper that constitutes the outer layer of the bag would remain attached to the adhesive label. This would prevent the adhesive label to be attached again to the bag when one wants to close the bag after having partially taken out its contents. In the past, attempts have been made to solve this problem by using special glues suitable for allowing adhesion to normal papers or by using special papers such as silicone papers for obtaining a releasable adhesion of the two parts by normal glues of the adhesive labels. However it is seen that the use of special glues or papers in normal bags would have resulted in unacceptable increases in the cost of packaging of the products.

In this sense, the present invention makes possible to use adhesive labels with normal glues and a normal type of paper with a result of optimizing also industrial production costs.

Solving the above mentioned problem is important. Recently the use of bags that are only made of paper and intended to contain pasta being produced by traditional techniques has come back into favor. Paper printed with graphic elements that remind of the good old days makes more attractive the purchase and greater the reputation of the producers. Among other things, in the absence of the coating paper, the direct molding of the polymeric transparent layer creates an ineffective mixture between printing elements and contents of the bag.

Disclosure of the invention

In this context, the technical task underlying the present invention is to propose a reclosable bag made of paper-plastic laminate which overcomes the drawbacks of the prior art mentioned above. In particular, an object of the present invention is to

allow the utilisation of an easy open adhesive label also in a bag externally made of paper or paper material, for the aforesaid advertising and commercial reasons.

The mentioned technical task and the specified objects are substantially achieved by a reclosable bag made of paper-plastic laminate, having a front side, a rear side and upper and lower heat-sealed edges, the bag comprising at least an external layer of paper or similar, possibly equipped in the front side of a front window to show the contents of the bag, and an inner polymeric lining film able to close the front window, if any, in the at least one external layer of paper, in which formed in the at least one external paper layer on the rear side of the bag is a rear window closed by the inner polymeric lining film, and an easy open adhesive label is permanently attached with its first portion on the paper layer of the upper edge of the bag and with its second portion in a releasable manner on the inner polymeric lining film that closes the rear window.

Brief description of drawings

Further characteristics and advantages of the present invention will be more clear from the indicative description, and therefore non-limiting, of a preferred not exclusive embodiment of a reclosable bag made of paper-plastic laminate, as illustrated in the accompanying drawings in which:

- Figure 1 is a perspective view from above and from the front of a bag in which the present invention is embodied;
- Figure 2 is a perspective view from above and from behind of the bag in Figure 1 according to the present invention; and
- Figures 3 to 7 are perspective views from above and substantially from behind of the bag in Figure 1 in subsequent steps of opening and closing of the bag after removing part of its contents.

Best mode for carrying out the invention

Referring to Figure 1, represented in a perspective view from above and from the front is a bag 1 in which features of the present invention are embodied. The bag 1 as represented in Figure 1 could be of a conventional type. The bag 1 has a front side 2 and upper and lower edges 3, 4. The edges 3 and 4 are heat-sealed, but in the following figures only the heat-sealing of the upper edges is shown. The bag 1

comprises at least an external layer 5 made of paper or similar. The external layer 5 is provided with a front window 6 in its front side in order to show the contents of the bag, e.g. pasta P. The front window 6 is closed by an inner polymeric lining film 7 that is laminated on the external paper layer 5, which can be also considered as a single-ply layer for convenience's sake in the description below.

Referring to Figure 2, which is a perspective view from above and from behind of the bag in Figure 1 according to the present invention, a rear window 9 is shown formed on the rear side 8 of the bag in the external paper layer 5 which delimits the visible part of the inner polymeric lining film 7.

10 In order to allow the bag to be repeatedly opened and closed according to the invention, an adhesive label 10 is used. As is known, the easy open adhesive labels have an adhesive layer on the active side for the connection between two parts in a bag, adhesive layer which, if it is not soiled by contact with the hands or with foreign substances, allows a bag to be opened and closed several times. This is currently possible only when the bags on which the adhesive labels are attached are of a plastic substance suitable such as polypropylene, whereby a contact with the plastic substance does not alter the effectiveness of the adhesive layer.

The easy open adhesive labels can not be used with either paper bags or bags provided with a paper layer outside, because their adhesive layer, when opening and closing, would bring with it part of the paper of the bag, and the label would immediately lose its ability to reattach itself to the paper layer of the bag.

According to the present invention, the problem of opening and closing several times a bag provided with a layer 5 of paper outside has been overcome thanks to the fact that formed on the rear side 8 of the bag is the rear window 9 in the outer layer 5 made of paper. The rear window 9 is closed with the inner polymeric lining film 7 that lines the bag 1 internally. It should be understood that, for the purposes of the present invention, it is not necessary that the film covers completely the interior of the bag, but that it simply closes the windows.

The adhesive label 10 is attached in a permanent manner with its first portion 11 to the upper edge 3 of the bag 1. On the rear window 9 a second portion 12 of the adhesive label 10 is releasably applied on the opposite side to the first portion 11 of

the same adhesive label 10, said first portion 11 being permanently attached to the paper layer 5 on an upper edge 3 of the bag.

Therefore, the rear window 9 has not been made to show the contents of the bag, but to allow the second portion 12 of adhesive label to adhere, i.e. the one intended to stick on the rear side 8 of the bag. The size of the rear window 9 in the direction of the width is slightly greater than the width of the adhesive label, so as to easily receive the latter, without the risk of being superimposed with the paper layer 5, and consequently losing its adhesiveness. The size of the rear window 9 in the direction of the length is such as to allow the positioning at different heights of the second portion 12 of the adhesive label 10 so as to stick in any position corresponding to the progressive decrease of the contained product.

Shown in Figures 3 to 7 are perspective views from above and substantially from behind, unless otherwise specified hereinafter, of the bag of Figure 1 in successive steps of opening and closing after partial removal of its contents.

In particular, shown in Figure 3 is a view subsequent to that of Figure 2 where the second portion 12 of the adhesive label 10 is detached from the polymeric lining film 7 that closes the rear window 9 of the paper layer 5, the adhesive label 10 remaining permanently attached with its first portion 11 (Figure 2) on the upper edge 3 of the bag 1. As shown in Figure 4, which is a view similar to that of Figure 3, the upper edge 3 is turned upward as indicated by the arrow A in Figure 3. In Figure 4 indicated as 13 is the heat sealing which seals the upper edges of the bag, the bag being shown opened in Figure 5 which is a three-fourths perspective view of the same. After the partial removal of the contents of the bag, the upper edge 3 is folded downward according to arrow C (Figure 6) and the second portion 12 of the adhesive label 10 is reattached to the desired height in the polymeric layer 7 which closes the rear window 9 of the paper layer 5. This is clearly shown in the perspective view from the front and from above in Figure 7.

The advantages provided by the invention should be evident.

So far the easy open adhesive label could not be used in the bags, and generally in paper packages, because if applied at the time of packaging, and lifted, even partially, for the removal of contents from a bag, it could not be reapplied to close

the bag. Actually in many packaging the adhesive label is still used as an anti-tamper protection, since the absence or the partial lifting of the adhesive label can be evidence to prove that the package could be no more intact.

It is clear that in packaging which must however remain sealed such as bags for
5 pasta, in which the sealing is obtained by heat sealing, the possibility of maintaining the contents of bags protected after their first opening until complete consumption of the product, already provided to the polypropylene bags, becomes a significant added value for paper bags, which are a way of packing more and more widespread in the distribution of food products.

10 This result is to be considered particularly effective if combined with the fact that it has been obtained without having to resort to particular materials, such as papers and particular films, or glues with special adhesive power.

With regard to other features of the invention described above, it should be understood that the height dimension of the rear window 9 is not binding and can be
15 chosen in such a way as to allow a proper closure for each minimum contents of the bag.

Other modifications and variations are possible, all within the scope of the attached claims.

CLAIMS

1. A re-closable bag (1) made of a paper-plastic laminate, having a front side (2), a rear side (8) and upper and lower heat-sealed edges (3, 4), the bag (1) comprising at least one external layer (5) made of paper or the like and being provided with a front window (6), if any, in the front side (2) for showing the contents (P) of the bag (1), and an inner polymeric lining film (7) adapted to close the front window (6), if any, in at least one external paper layer (5), characterised in that a rear window (9), that is closed by the inner polymeric lining film (7), is made on the rear side (8) of the bag (1) in at least one external paper layer (5), and an easy open adhesive label (10) is attached permanently at a first portion (11) thereof on the external paper layer (5) of the upper edge (3) of the bag (1) and at a second portion (12) thereof releasably on the inner polymeric lining film (7) that closes the rear window (9).
2. A bag according to claim 1, wherein the rear window (9) is of an elongated shape extending in the direction from the upper edges (3) to the lower edges (4) of the bag (1).
3. A bag according to claim 1, wherein the inner polymeric lining film (7) is transparent.
4. A bag according to claim 1, wherein the inner polymeric lining film (7) is made of polypropylene.

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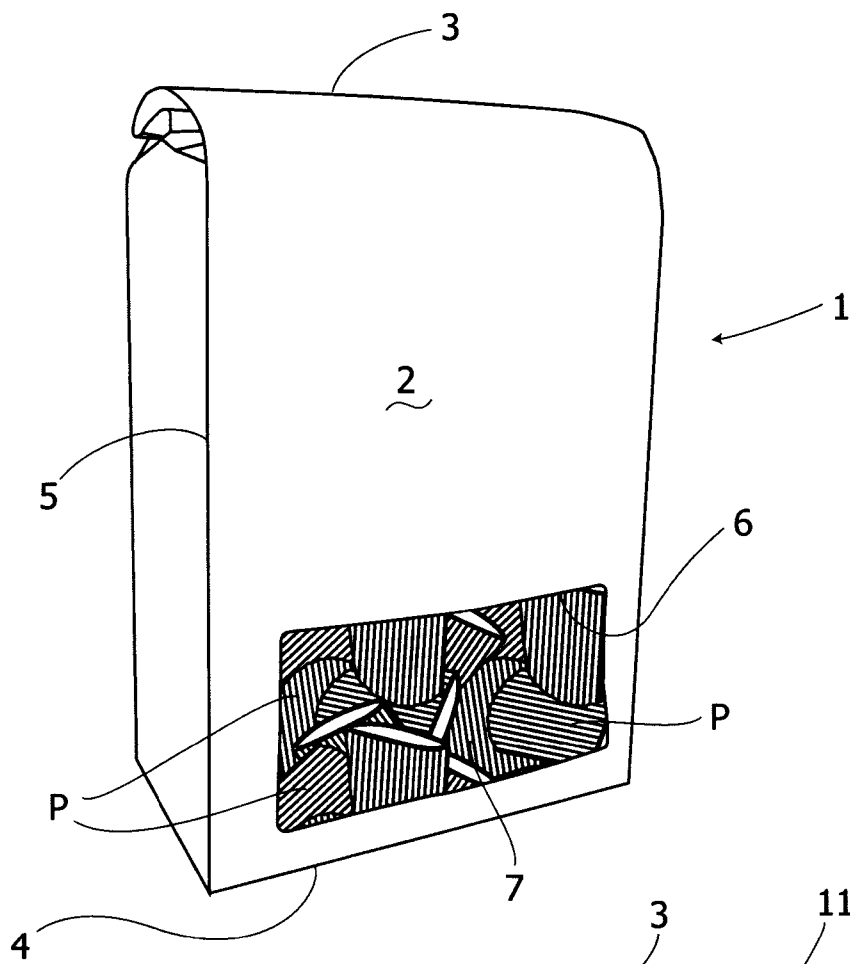


Fig. 1

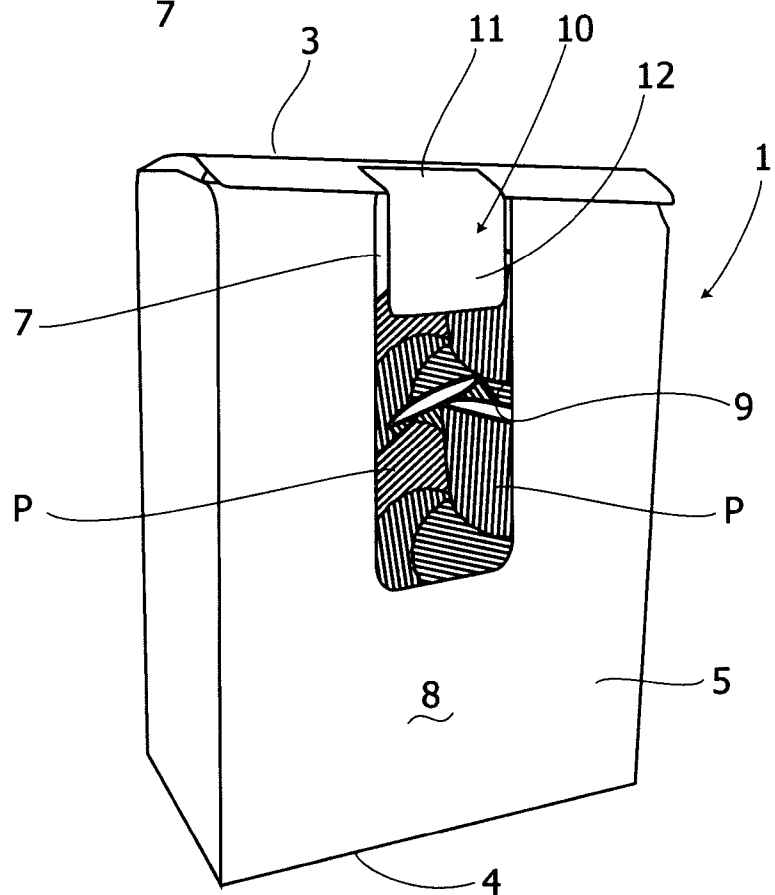


Fig. 2

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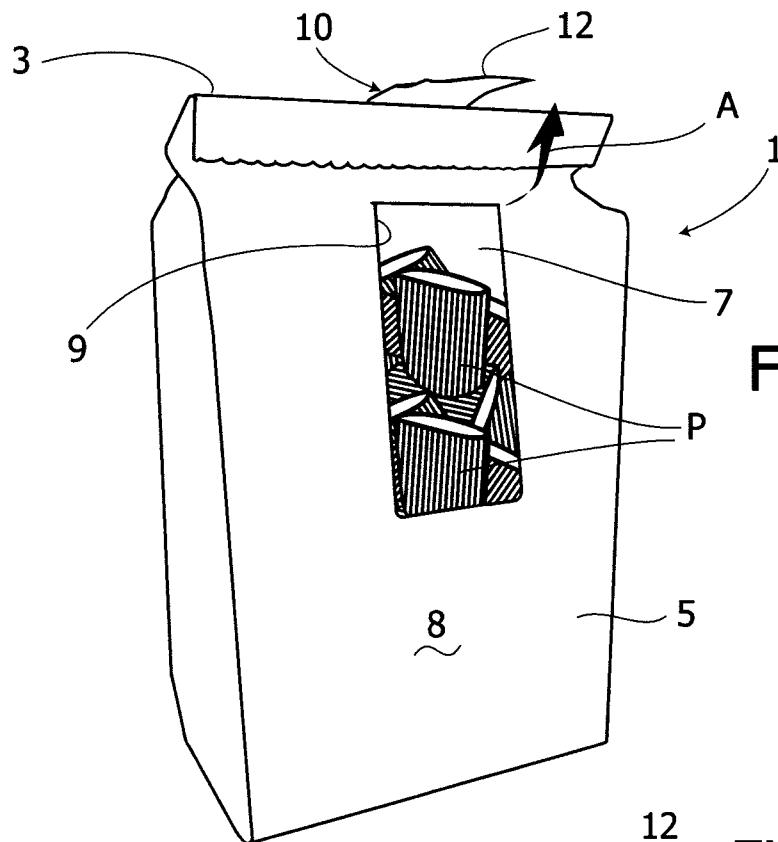


Fig. 3

Fig. 4

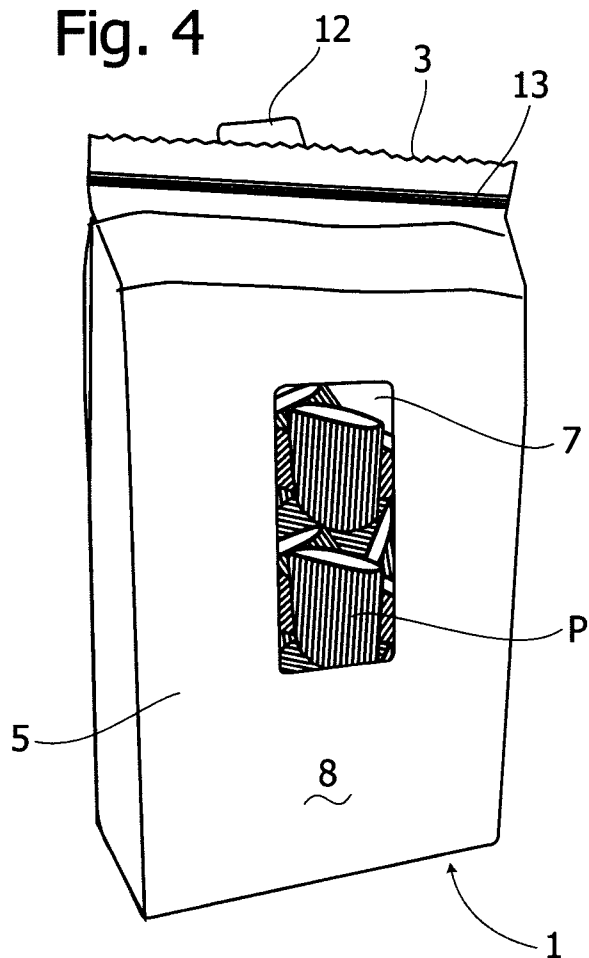
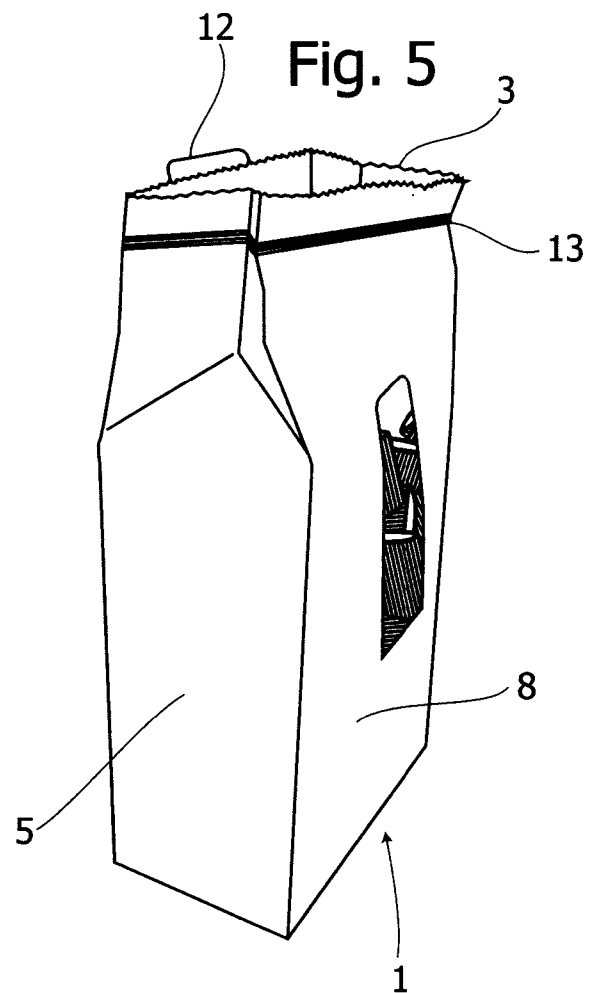


Fig. 5



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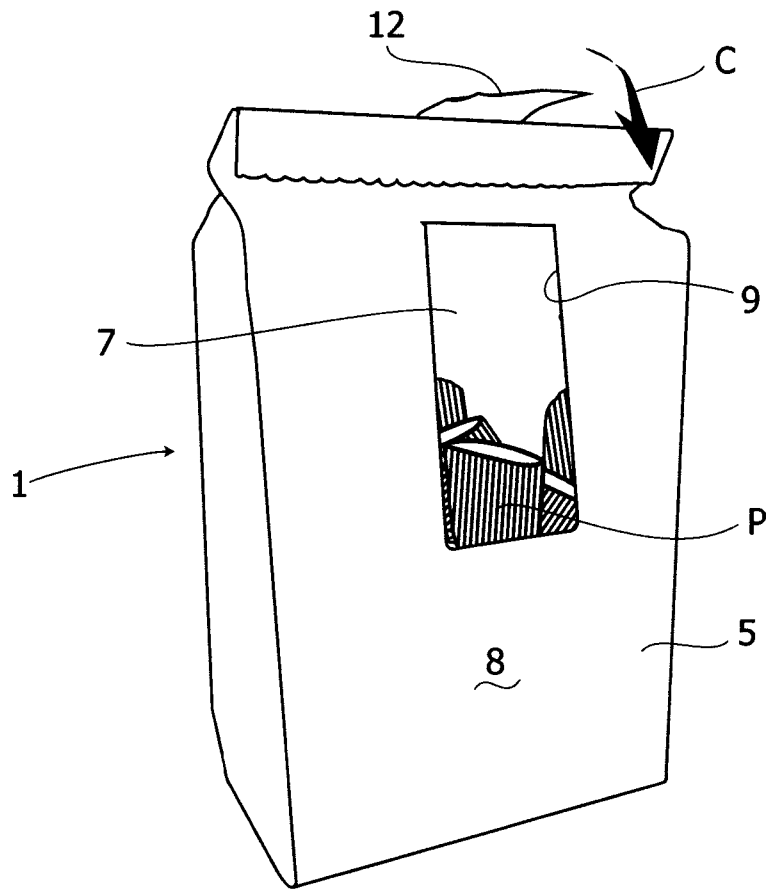


Fig. 6

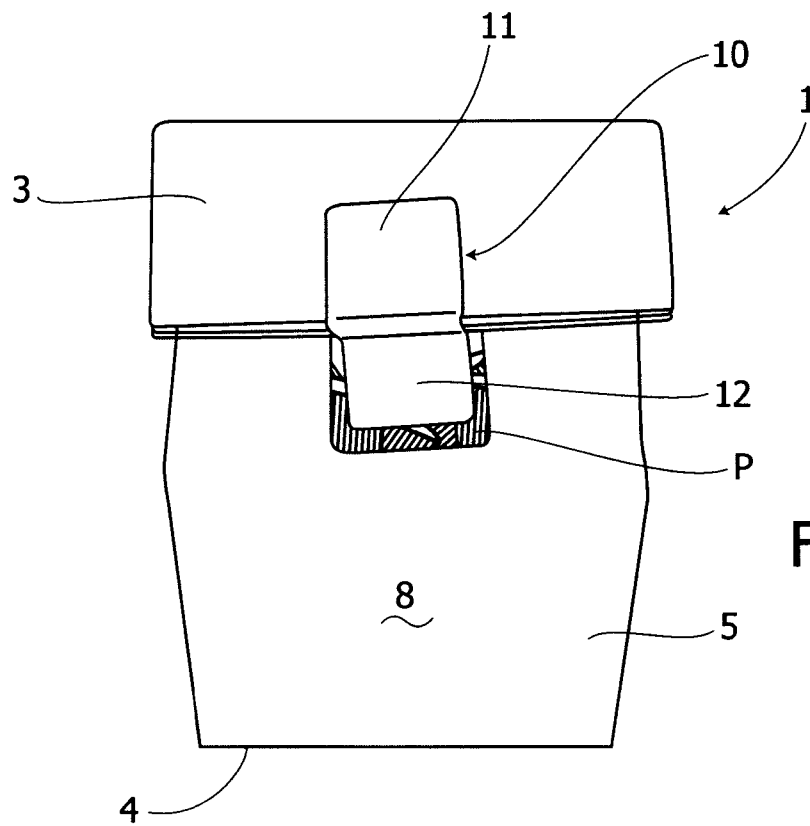


Fig. 7