(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 562 592 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **93104922.5**

(51) Int. Cl.5: **B65D 75/66**

(22) Date of filing: **25.03.93**

(30) Priority: **27.03.92 IT PD920050**

(43) Date of publication of application:
29.09.93 Bulletin 93/39

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IE LI LU NL PT SE

(71) Applicant: **BURGOPACK STAMPA, TRASFORMAZIONE, IMBALLAGGI S.p.A.**
Via Dalmastro, 2
I-36030 Lugo Di Vicenza (Province of Vicenza)(IT)

(72) Inventor: **Visona', Sergio**
residing at Via Matteotti, 52
I-36010 Chiuppano (Prov. of Vicenza)(IT)

(74) Representative: **Modiano, Guido, Dr.-Ing.**
Modiano & Associati S.r.l. Via Meravigli, 16
I-20123 Milano (IT)

(54) Pretreated sheet for flexible packages.

(57) Pretreated sheet for flexible packages comprising a film-like element (12) which has one face (15) on which regions are spread with a cold-bonding agent (16). At least one tape (13) with a protruding end is bonded onto this face (15) with a face which is spread with hot-melting bonding agent (18). The tape (13) is spread with cold-bonding agent (22) on its other face at regions whereat the tape overlaps the cold-bonding agent (16) of the film-like element (12). In the overlapping regions the bonding agent is applied in a discontinuous manner.

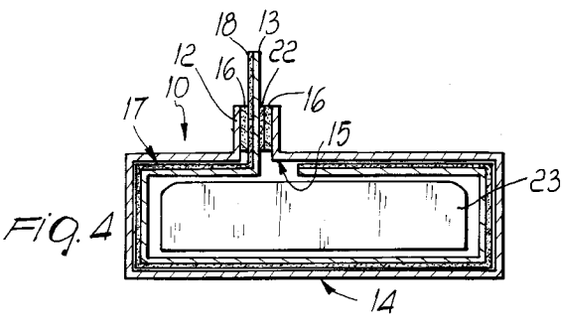

Fig. 4

EP 0 562 592 A2

The present invention relates to a pretreated sheet for flexible packages.

Flexible packages having a pillow-like shape, for example for food products, are manufactured by means of sheets cut from films wound in a roll.

A tape is coupled transversely on the face of each sheet which is to be located on the inside of the package; an end of said tape protrudes and projects from the package and facilitate its opening.

The tape is also cut from a film wound on a roll.

The face of the package sheet which is on the inside is perimetrically spread, using a template, with a cold-bonding agent, and packaging occurs by mating two flaps so as to form a tubular element which is bonded at its ends after it has been filled with the product.

The cold-bonding agent acts in an optimum manner by glueing on further cold-bonding agent, so that usually the tape, too, is spread with cold-bonding agent; it is spread completely on the face which fully adheres to the internal face of the sheet and is partially spread, so as to avoid contaminating the product, in the regions where mating between the flaps so as to form the tubular element entails its interposition in the bonding regions.

This is done to avoid air passages between the outside and the inside of the package.

The film in rolls suitable to form the tapes is therefore completely spread with cold-bonding agent on one face and is spread in regions on its other face.

For this reason, an interlay or interposed layer is used to avoid sticking and jamming of the material in rolls during the production of the material and during packaging.

However, the presence of the interposed layer during roll preparation increases production and processing costs with consequent additional operations.

The aim of the present invention is to eliminate the problem described above by providing a pretreated sheet for flexible packages, the components whereof can be wound in a roll without requiring an interposed layer.

A consequent primary object of the invention is to accelerate and facilitate both the process for preparing the rolls of the films suitable to feed automatic packaging machines and the packaging process itself.

Another important object of the invention is to reduce production and processing costs.

A further object of the invention is to provide a pretreated sheet for flexible packages which can be manufactured with conventional equipment and facilities.

This aim, these objects and others which will become apparent hereinafter are achieved by a pretreated sheet for flexible packages, characterized in that it comprises a film-like element which has one face on which regions are spread with a cold-bonding agent; at least one tape with a protruding end bonded onto said face with a face which is spread with hot-melting bonding agent; said tape is spread with cold-bonding agent on its other face on the regions which overlap the cold-bonding agent of said film-like element, on which said regions are appropriately made discontinuous.

Further characteristics and advantages of the invention will become apparent from the detailed description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a perspective view of a package manufactured with a pretreated sheet according to the present invention;

figure 2 is a view in which the package of figure 1 is cut transversely;

figure 3 is a view of the pretreated sheet according to the present invention;

figure 4 is a schematic transverse sectional view of the package of figures 1 and 2;

figure 5 is a schematic sectional view of the sheet of figure 3;

figure 6 is an exploded detail view of the pretreated sheet of figure 3.

With reference to the above figures, a package having a pillow-like shape is designated by the reference numeral 10 and comprises a pretreated sheet 11 which is substantially composed of two elements: a film-like element 12 and a tape 13 which is coupled to said film-like element transversely and protrudes from it with one end.

Both the film-like element 12 and the tape 13 are fed from a roll and are appropriately cut.

The film-like element 12 is composed of a material such as aluminum, paper-like material, polypropylene, etc., whereas the tape 13 is preferably made of polypropylene or of another film of plastic material.

The film-like element 12 can bear printing suitable for example to identify the product it contains, whereas its internal face 15 is perimetrically spread with a cold-bonding agent 16.

The cold-bonding agent 16 is spread, using a template, directly on the film-like element 12 or onto a layer of paint which covers it, leaving free the internal region which is to be placed in contact with the product.

The tape 13 is coupled to the internal face 15 with one of its faces 17 which is completely spread with a hot-melt bonding agent 18.

Coupling occurs by resting the tape 13 on the element 12 by means of a bar (which is heated).

The hot-melting bonding agent 18 acts when it is heated to a relatively low temperature, but has poor characteristics for bonding with the cold-bonding agent 16, so that on the regions 19 in which the tape 13 overlaps said cold-bonding agent said regions are appropriately made discontinuous, providing mutually isolated sectors 20 in which the cold-bonding agent is missing or is covered with a plastic film.

In this manner, the tape 13 adheres perfectly onto the film-like element 12 even in the regions 19 without forming air passage regions.

On its face 21, which is opposite to the face 17, the tape 13 is spread, at the regions 19, with cold-bonding agent 22 of the same type as the one already designated by the reference numeral 16.

The package 10 is thus formed by folding the sheet 11 so as to obtain a tubular element, as shown in figure 4, by mating two sides of the internal face 15 on which the cold-bonding agent 16 is present.

As regards the superimposition of the tape 13 on the film-like element 12, in figure 4 it can be seen that the cold-bonding agent 22 compensates for the lack of the cold-bonding agent 16 due to the superimposition of said tape 13.

After the formation of the tubular element, the package 10 is filled with product 23 and bonded on its ends, where regions with cold-bonding agent 16 overlap.

The result is a pillow-shaped package which is bonded on three sides exclusively by the action of pressure, due to the presence of the cold-bonding agent, and has a continuous seal, due to the absence of non-bonding portions.

It should be noted that one end of the tape 13 protrudes; it is sufficient to pull it to facilitate the opening of the package.

The presence of two different and incompatible bonding agents on the tape 13 allows the material to be prepared in rolls without the occurrence of sticking and accordingly of jamming during unrolling for use.

The presence of an interlay or layer which is interposed during roll preparation, which currently leads to an increase in production and processing costs, is therefore no longer necessary.

In practice it has thus been observed that the intended aim and objects of the present invention have been achieved.

The invention thus conceived is susceptible to numerous modifications, all of which are within the scope of the inventive concept.

All the details may furthermore be replaced with other technically equivalent elements.

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 the requirements.

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 scope of each element identified by way of example by such reference signs.

Claims

1. Pretreated sheet for flexible packages, characterized in that it comprises a film-like element which has one face on which regions are spread with a cold-bonding agent; at least one tape with a protruding end is bonded onto said face with a face which is spread with hot-melting bonding agent; said tape is spread with cold-bonding agent on its other face on the regions which overlap the cold-bonding agent of said film-like element, on which said regions are appropriately made discontinuous.

2. Sheet according to claim 1, characterized in that said cold-bonding agent is spread on said film-like element perimetrically.

3. Sheet according to claims 1 and 2, characterized in that said cold-bonding agent is spread on said film-like element directly or on a layer of paint which covers it.

4. Sheet according to one or more of the preceding claims, characterized in that said film-like element is made of paper-like material, polypropylene, aluminum or of another equivalent material.

5. Sheet according to one or more of the preceding claims, characterized in that said tape is made of polypropylene or of another equivalent material.

6. Sheet according to one or more of the preceding claims, characterized in that said discontinuous regions are obtained by providing isolated sectors which have no cold-bonding agent or in which said cold-bonding agent is covered by paint or by an equivalent substance.

7. Sheet according to one or more of the preceding claims, characterized in that printing is provided on the face suitable to be on the outside of the package, in order to identify the product contained.

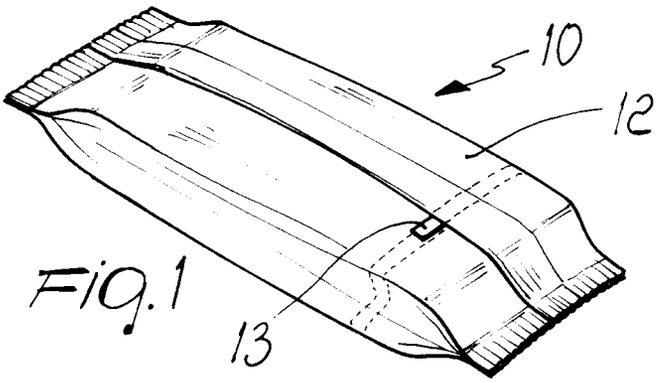

Fig.1

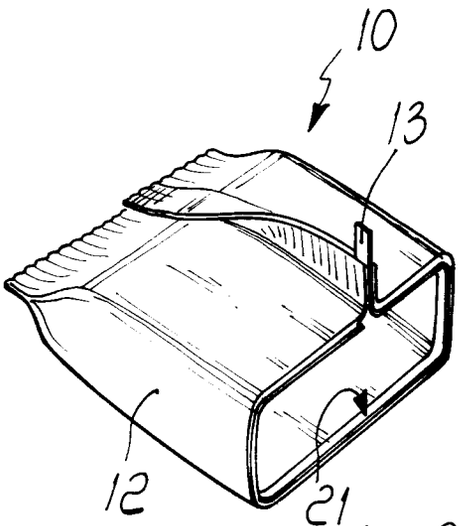

Fig.2

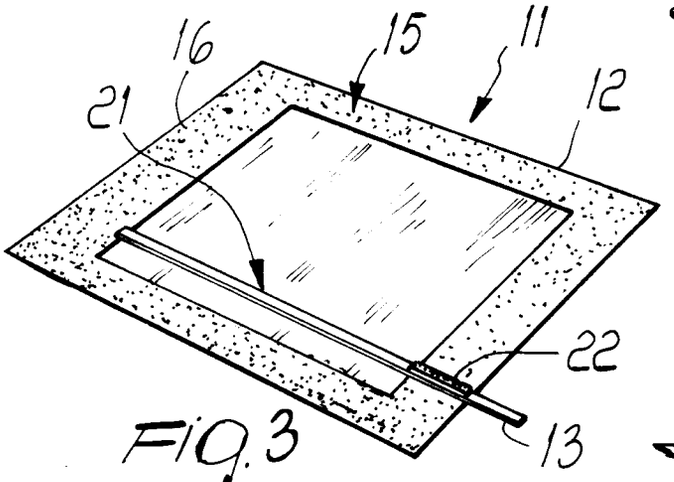

Fig.3

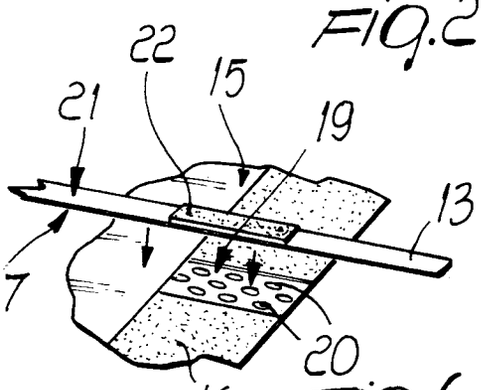

Fig.6

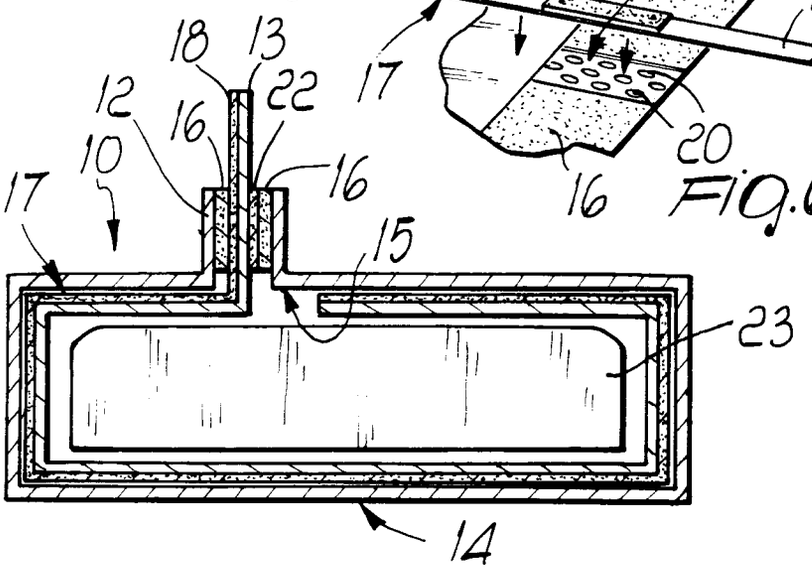

Fig.4

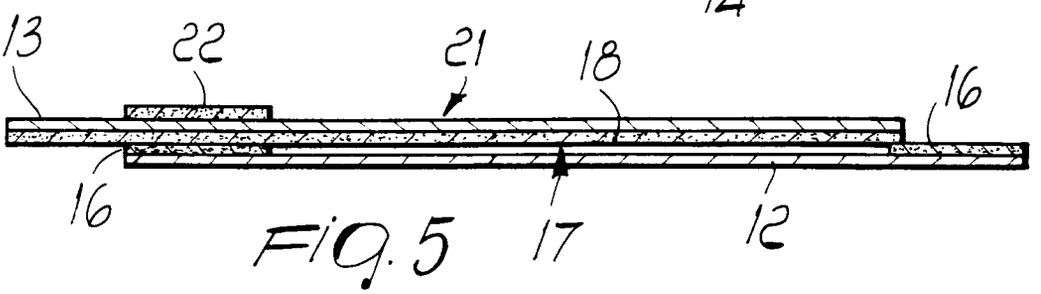

Fig.5