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⑤4 **Tubular container, particularly for food products.**

the two longitudinal bands (8) are glued to one another with the interposition of an end portion (21) of a tear-strip (14), the opposite surfaces whereof are coated by respective layers of cold-adhesive.

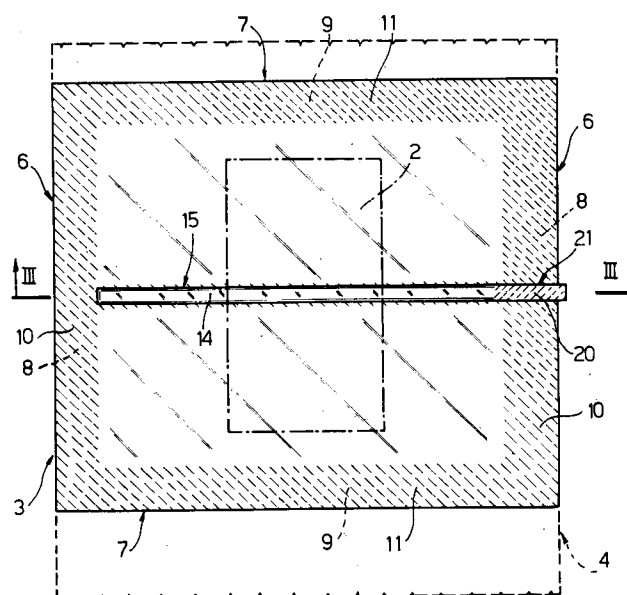


Fig. 2

The present invention relates to a tubular container particularly for food products.

In the field of food products it is known to use, especially for packaging products which have a generally parallelepipedal shape, so-called tubular wrappings, which are manufactured starting from a continuous band, one surface of which, hereinafter indicated as "inner surface", is suitable for making contact with the products to be wrapped and has two peripheral longitudinal regions covered by respective layers of heat-weldable adhesive material.

Generally, said products are packaged by arranging them in succession in contact with the inner surface of the band, which is then folded transversely until the layers of adhesive material of said two peripheral longitudinal regions are moved into mutual contact so as to define, once they are subjected to a heat-welding operation, a continuous tubular container which is laterally provided with a flap which is constituted by the mutually welded opposite longitudinal edges of the band.

Said continuous tubular container is subsequently cut in portions which are welded at their ends and have a preset length; each portion defines a tubular fluid-tight wrapping for a related product.

For many food products packaged in the above described manner it is necessary to produce said wrappings so that they are particularly easy to open and so that their opening does not entail the complete destruction of said wrappings, a part of which must remain preferably intact and protect the related products until they are eaten.

This need is normally met by transversely applying, on each wrapping, a tear-strip which allows to easily divide said wrapping into two parts. In order to allow the opening of the wrapping, the strip has one end which extends outside said mutually welded longitudinal edges of the band.

Generally, said strips are constituted by, or covered with, heat-weldable material, so as to initially allow their application onto the continuous band by means of a heat-welding operation and subsequently, by means of a second previously mentioned heat-welding operation, so as to allow the execution of the tubular container, which affects not only the longitudinal edges of the continuous band but also the end of the strips which is interposed between said longitudinal edges.

The above described known tubular wrappings have the disadvantage of requiring, for their manufacture, a succession of operations involving heat, which can entail a deterioration of the packaged products.

The aim of the present invention is to provide a tubular container which does not require operations involving heat for its manufacture.

According to the present invention, a tubular

container particularly for food products is provided which comprises a portion of sheet material having an inner surface arrangeable in contact with a related product, two longitudinal edges and two transverse edges, a layer of adhesive material applied on a band of said inner surface which extends along each of said edges, and a tear-strip which extends in contact with said inner surface transversely to said longitudinal edges, said sheet being folded so as to move into mutual contact both the two inner surface bands arranged along the longitudinal edges, with the interposition of an end portion of said strip, and the two inner surface bands which are arranged along the transverse edges, characterized in that said adhesive material is a cold-adhesive material, a first further layer of cold-adhesive material coating a first surface of said strip which faces said inner surface, and a second further layer of cold-adhesive material coating at least one portion of a second surface of said strip which is opposite to said first surface, said portion of second surface extending along said end portion of said strip.

Preferably, a layer of cold-adhesive material is applied on a portion of said inner surface which is arranged in contact with said first surface of said strip.

The present invention will now be described with reference to the accompanying drawings, which illustrate a non-limitative example of an embodiment thereof, wherein:

figure 1 is a perspective view of a preferred embodiment of the container according to the invention;

figure 2 is a plan view of a development of the wrapping of figure 1; and

figure 3 is a sectional view taken along the line III-III of figure 2.

With reference to figure 1, the reference numeral 1 generally indicates a tubular and substantially "pillow-shaped" container or wrapping for a product 2 (figures 2 and 3), particularly a food product, having a substantially parallelepipedal shape.

According to what is illustrated in figure 2, the container 1 is manufactured starting from a planar rectangular sheet 3 obtained by transversely cutting a continuous band 4, and has an inner surface 5 (figure 3) which can be arranged in contact with a related product 2 and is delimited by two longitudinal edges 6 and by two transverse edges 7. Bands 8 and 9 of the inner surface 5 which extend along the edges 6 and 7 respectively are coated with respective layers 10 and 11 of cold-adhesive material.

The container or wrapping 1 is manufactured by folding the sheet 3 around the product 2 so as to move the two bands 8, and the adhesive layers

10 which coat them, into contact with one another so as to mutually connect them and form a flap 12 which, according to what is illustrated in figure 1, extends in a longitudinal direction outside said container 1 and is folded into contact with an outer surface of the sheet 3. The container 1 is then completed by making the layers 11, arranged along the mutually facing transverse bands 9, adhere to one another so as to form two transverse flaps 13.

If, as in the illustrated example, the sheet 3 is part of a continuous band 4, the operation of mutually glueing the layers 11 and of forming the flaps 13 is performed simultaneously with an operation of transverse cutting of said band 4.

According to what is illustrated, in particular, in figure 2, the container 1 furthermore comprises a tear-strip 14 which extends in contact with an intermediate band 15 of the inner surface 5 of the sheet 3 transversely to the longitudinal edges 6. According to what is more clearly illustrated in figure 3, the intermediate band 15 is preferably but not necessarily coated with a layer 16 of cold-adhesive material. The strip 14 has a length at least equal to the distance comprised between an inner edge of one of the two longitudinal bands 8 and the longitudinal edge 6 which is opposite thereto, and the strip 14 is arranged so as to extend through one of the longitudinal bands 8 and be secured between said two bands 8 during the formation of the flap 12.

According to what is illustrated in figure 3, the strip 14 has a first surface 17, which is arranged in contact with the band 15 of the inner surface 5 of the sheet 3 and is coated with a layer 18 of cold-adhesive material, and a second surface 19, which is opposite to the surface 17 and is at least partially coated by a layer 20 of cold-adhesive material. In particular, said layer 20 extends, as in the illustrated example, to a portion of the surface 19 which extends along an end portion 21 of the strip 14 which is superimposed on one of the bands 8.

From the above description it can be deduced that the described container 1 can be obtained without performing any operation involving heat and that the container 1 is furthermore a perfectly fluid-tight container, as normally required by hygiene rules related to the packaging of food products. The presence of the layer 20 of cold-adhesive material, at least on the portion of the surface 19 which extends to the end portion 21 of the strip 14, ensures the perfect closure of the wrapping 1 along the flap 12. On this subject it should be stressed that one of the disadvantages normally occurring in cold-adhesives is that they do not ensure tightness unless glueing between two opposite adhesive layers is performed. Consequently, the wrapping 1 would not be perfectly fluid-tight if the layer 20 were missing.

The optional presence of the layer 16 along the intermediate band 15 of the surface 5 ensures the perfect adhesion of the strip 14, along its entire length, to the sheet 3 and, accordingly, a clear-cut splitting of the wrapping 1 into two parts when the strip 14 is pulled. One of said parts can be easily used to protect the product 2 while eating it.

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. Tubular container (1) , particularly for food products, comprising a portion (3) of sheet material having an inner surface (5) arrangeable in contact with a related product (2), two longitudinal edges (6) and two transverse edges (7), a layer (10, 11) of adhesive material applied over a band (8, 9) of said inner surface (5) which extends along each of said edges (6, 7), and a tear-strip (14) which extends in contact with said inner surface (5) transversely to said longitudinal edges (6), said sheet (3) being folded so as to bring into mutual contact both the two inner surface bands (8) which are arranged along the longitudinal edges (6), with the interposition of an end portion (21) of said strip (14), and the two bands (9) of the inner surface (5) which are arranged along the transverse edges (7), characterized in that said adhesive material is a cold-adhesive material, a first further layer (18) of cold-adhesive material coating a first surface (17) of said strip (14) which faces said inner surface (5), and a second further layer (20) of cold-adhesive material coating at least one portion of a second surface (19) of said strip (14) which is opposite to said first surface (17), said portion of said second surface (19) extending along said end portion (21) of said strip (14).
2. Container according to claim 1, characterized in that a layer (16) of cold-adhesive material is applied on a portion (15) of said inner surface (5) which is arranged in contact with said first surface (17) of said strip (14).
3. Container according to claim 1 or 2, characterized in that said strip (14) has a length which is at least equal to a distance comprised between an inner edge of one of said two bands (8) which extend along said longitudinal edges (6)

and the longitudinal edge (6) which is opposite to said band (8).

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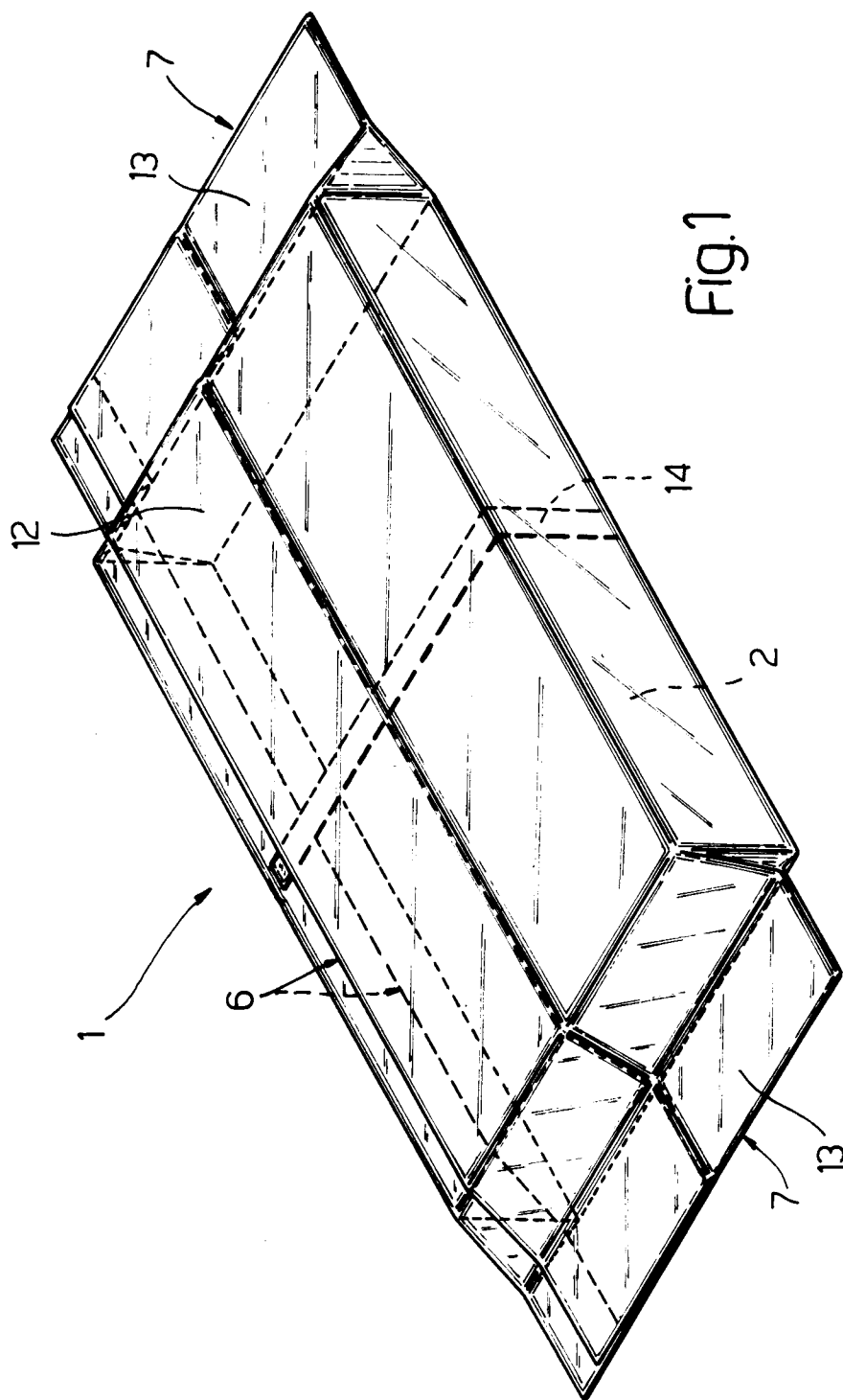


Fig.1

Fig.3

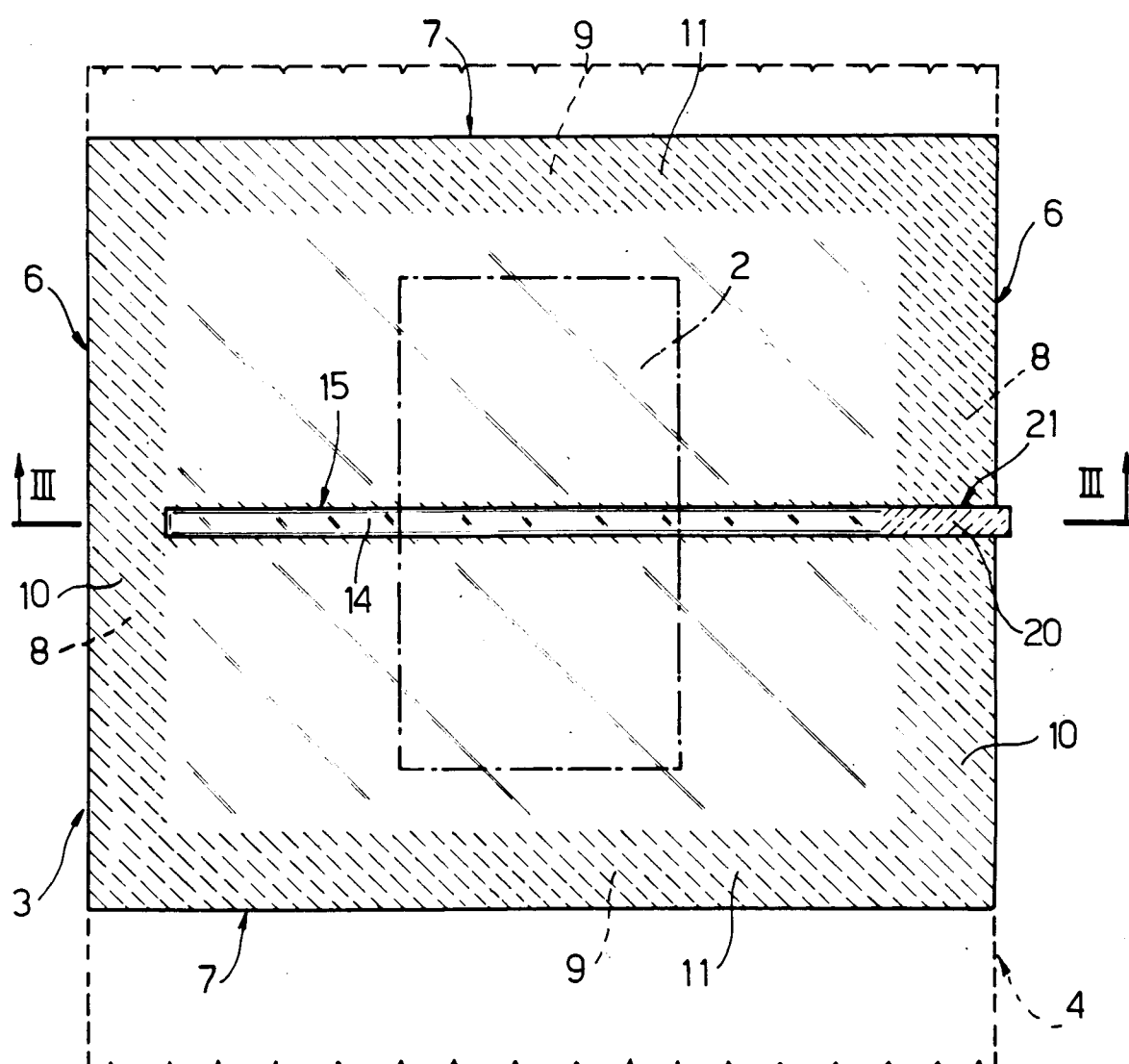
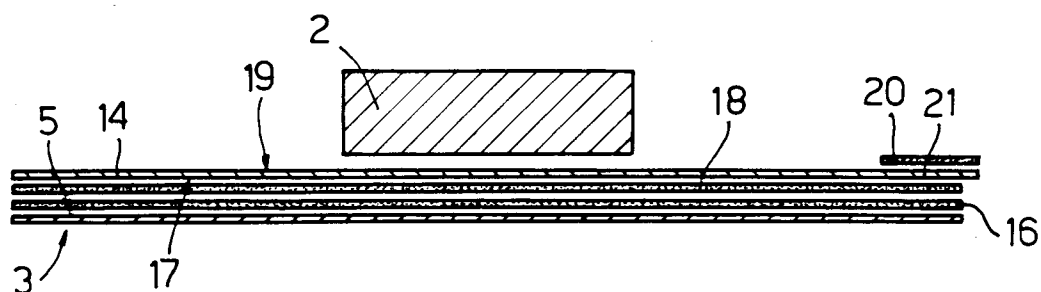


Fig. 2



Application Number

EP 91 11 2027

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|--|---|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
| Y | EP-A-0 109 353 (SIG SCHWEIZERISCHE INDUSTRIE-GESELLSCHAFT) * the whole document * | 1-3 | B 65 D 75/20 |
| Y | WO-A-8 702 011 (FOLIENWALZWERK BRÜDER TEICH AKTIENGESELLSCHAFT) * claim 4 * | 1-3 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.5) |
| | | | B 65 D |
| The present search report has been drawn up for all claims | | | |
| Place of search | | Date of completion of search | Examiner |
| Berlin | | 04 October 91 | SMITH C A |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention | | E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |