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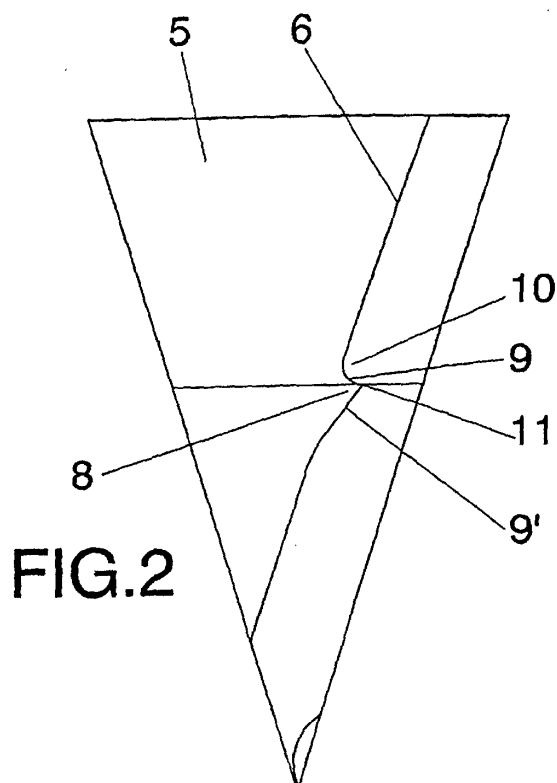
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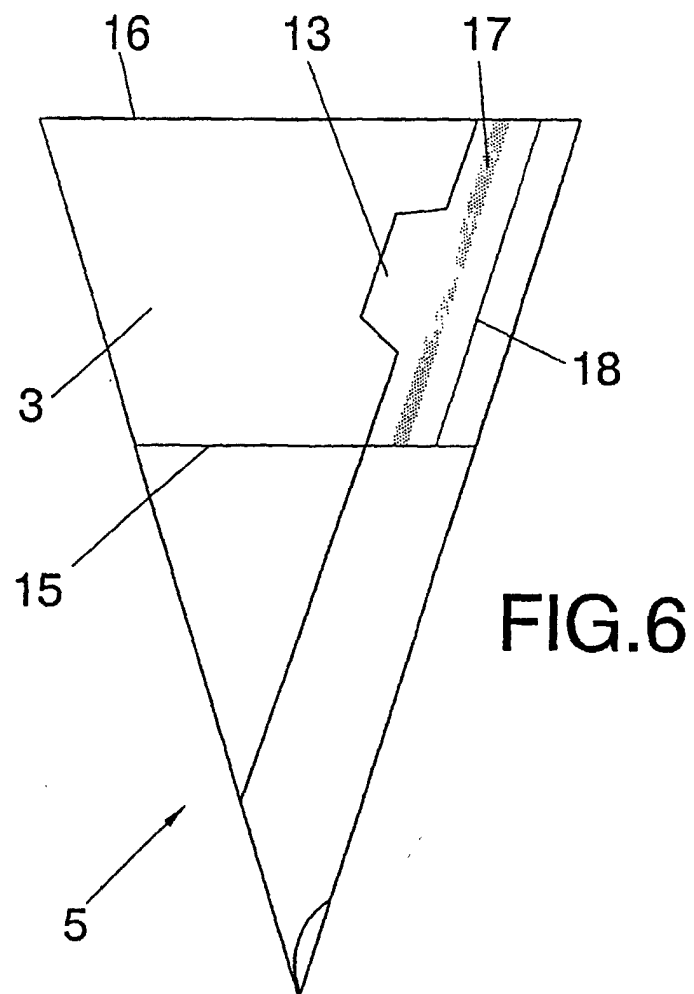
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(54) **LAMINATE PACKAGING FOR ICE CREAM CONES**

(57) Of the type constituted by a laminar body, based on a paper-aluminium composition which shapes a cone (5) coincident in form and dimensions with the cone biscuit which it shall hold in its interior, having on its closing edge (6) a seam (8) of angular configuration, so that in the area immediately above this seam a tab for tearing (10) is configured which is recessed with respect to the closing edge (6). The vertex (11) of said angular seam (8) constitutes a guide which facilitates the tearing of the wrapping. Optionally, the laminar body which configures the cone (5) can come with a circumferential cutting line (15) located below the pulling flap (13), defining a tear line for the wrapping in the operation of opening the same, emerging from that circumferential cutting line (15) another cutting line (18) parallel and next to the adhesive strip (17), the purpose of this second cutting line (18) being to interrupt a possible de-layering between the paper and the aluminium, during the opening operation.





Description

OBJECT OF THE INVENTION

[0001] The present invention concerns a laminar wrapping of the type of those usually employed for obtaining a cone based on a paper-aluminium composition or similar, which acts as a means of protection for the cone biscuit which in turn holds an edible ice cream.

[0002] The object of the invention is to achieve a reduction in the quantity of material used in the production of the wrapping, and secondly to facilitate the subsequent opening and elimination of the same.

BACKGROUND OF THE INVENTION

[0003] It is well known that constituting an entirely widespread technique within the ice cream industry, specifically within the ambit of ice creams that are delivered to the customer directly packed from the maker, and more specifically within the ambit of the "cone" type ice cream in which the ice cream mass fills a cone biscuit, is the use of a wrapping based on a paper-aluminium composition, initially of triangular configuration, with one of its sides curved convexly, which when closed on itself forms a cone with its base open, coincident in form and dimensions with the cone biscuit which it has to receive well-fitted on its interior, said laminar body being fixed in the closed situation by means of an adhesive strip located in correspondence with one of its generatrices.

[0004] To facilitate the subsequent operation of tearing or opening the wrapping, one of the straight edges thereof comes with a projecting tab, serving as a grip for said tearing action, which signifies a twofold problem, on one hand the presence of this tab supposes a considerable increment in the quantity of material required for the wrapping, since besides that corresponding to the tab itself, the material located at both sides of the same is lost in the stamping operation, and on the other hand the tearing of the wrapping by pulling on said tab is uncontrolled, occurring on many occasions in unwanted areas, which do not correspond to the ideal situation in which said tearing ought to take place on the periphery at a level immediately below said tab, in order to retain a small encircling cone in the area where the ice cream is held.

[0005] Moreover and as the tab mentioned projects and is physically independent of the base surface of the cone to which it is initially adapted, during the normal manipulation of the ice creams a separation frequently takes place of the same with respect to the actual cone, which on occasions can cause ripping of the actual tab or even a slight commencement in the opening of the container, affecting the sealing of the same.

[0006] Moreover, because the laminar wrapping is closed on itself by means of an adhesive strip, located in correspondence with one of the generatrices of the

cone, and due to the layered nature of this laminar wrapping, when the tab is pulled the de-layering of the sheet takes place on many occasions, whereby only the detachment of the external layer takes place, that of aluminium, the inner sheet, that of paper, remaining associated with the rest of the structure of the cone, whereby after a first operation in this sense it is necessary to carry out a second operation to remove the paper layer, in this case however without having the tab in order to pull on the same.

[0007] Due likewise to the tight bond which the adhesive defines between the superimposed sectors of the laminar wrapping, when the detachment of the same takes place, it happens abruptly with an uncontrolled tear, which can run indistinctly toward the mouth of the wrapping or toward the vertex thereof depending on the angle of inclination with which the pulling force is applied on the tab, obtaining as a result, in either case, a completely deficient and undesirable opening.

[0008] In attempts to overcome this problem laminar wrappings are known of the type mentioned in which the closing of the laminar body is achieved by means of a continuous strip of adhesive below the tab and a discontinuous strip above it, for example based on an alignment of glued points, which does not resolve the mentioned situation in a satisfactory manner insofar as the de-layering problem remains, and it also produces a tendency to oblique tearing of the sheet toward the vertex of the cone.

[0009] Moreover, this discontinuous closure of the upper area of the wrapping signifies that the closure of the same is not totally sealed, with the consequent risk of penetration by bacteria, dirt, etc.

DESCRIPTION OF THE INVENTION

[0010] The wrapping which the invention discloses has been conceived and structured in order to resolve in a fully satisfactory manner the problem described above, in the aspects mentioned.

[0011] To this end, in a more specific way and in accordance with the invention, in the laminar body constituting the wrapping the classic projecting tab has been suppressed, and has been replaced by an angular seam, which in the first place supposes a substantial saving in material, since the layered sheet with which one starts for obtaining the wrapping can be shorter, specifically in the measure corresponding to the width of the traditional tab and of length coincident with the generatrix of the cone.

[0012] Moreover, the gripping tab of the cone for tearing is defined by one of the sides of the angular seam, specifically that nearest the mouth of the cone, whereby this tab, by not being projecting outwards, cannot be separated accidentally or unwittingly from the cone itself, whereby the risk that the same can be folded outwards, folded back on itself or be ripped is absolutely nil, and it is also impossible for accidental initiation to

occur in the opening of the container which causes the latter to lose its perfect seal.

[0013] In addition, the vertex constituting the bottom of the aforementioned seam acts as a guide which assures that the tearing of the container, during the opening thereof, takes place over the area foreseen for this end, at least in its initial phase.

[0014] Another characteristic of the laminar wrapping for cone type ice creams resides in establishing a special arrangement for opening in the wrapping, being based on providing the paper inner sheet with a circumferential or peripheral cut, at middle level in height, specifically in correspondence with the theoretical line of rupture of the laminar wrapping, for removal of the upper part thereof, from which circumferential cutting line emerges another cutting line toward the mouth of the wrapping, on one of the generatrices, located immediately inside the adhesive strip through which the laminar body from which one starts for obtaining the wrapping, is closed on itself in order to configure the cone.

[0015] This circumferential cutting line can be replaced by other types, it being possible to adopt an irregular shape or be in spiral form, which produce fancy openings.

[0016] Thus, when one pulls on the tab serving as a grip, obviously located above the circumferential cutting line, the tear is compelled to follow said circumferential cutting line, that is to take place along the theoretically ideal line, and also in the supposition that the adhesive closing the cone should cause in the upper half thereof a de-layering effect, this effect can only take place in a narrow marginal strip, that defined by the cutting line in the generatrix direction, since on reaching said cutting line the de-layering is interrupted and starting therefrom the paper inner sheet remains unavoidably bound to the aluminium outer sheet, accompanying the latter in its detachment with respect to the lower part of the cone.

[0017] In this way it is achieved that after opening the wrapping a small lower cone is defined, which remains associated with the ice cream, having perfectly predefined dimensions and a perfect finish, and that a wide upper strip is removed, providing access to the cone biscuit, in a sure, quick and straightforward operation.

[0018] The cuts in the paper inner sheet can be made by mechanical means, with the collaboration of blades, by laser or by any other means that is considered appropriate.

[0019] Finally it is mentioned that the material of the laminar body can be a composition of aluminium paper or other materials, like for example, combinations of materials or single materials like paper, plastics or others.

DESCRIPTION OF THE DRAWINGS

[0020] To complete the description that is being made and with the object of assisting in a better understanding of the characteristics of the invention, in accordance with a preferred example of practical embodiment there-

of, accompanying said description as an integral part thereof, is a set of drawings wherein, by way of illustration and not restrictively, the following has been represented:

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Figure 1. - It shows a schematic representation in side elevation of a laminar wrapping for conventional, cone type ice creams.

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Figure 2. - It shows, according to a representation like that of the previous figure, a wrapping for ice creams of similar characteristics but implemented in accordance with the object of the invention.

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Figure 3. - It shows a partial detail in perspective and considerably enlarged of the laminar body which participates in the wrapping of the previous figure.

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Figure 4. - It shows a development in plan of a laminar wrapping for cone type ice creams provided with the special opening arrangement which is part of the object of the invention.

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Figure 5. - It shows an enlarged detail in section of the laminar wrapping of the previous figure, at the level of one of the cutting lines which partially affect said wrapping.

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Figure 6. - It shows a view in side elevation of the same laminar wrapping as in the previous figure, after adopting its definitive conical configuration, in which the cuts have been represented in which the opening arrangement is materialized, although in an external view they are not visible through being located on the internal face of the wrapping, for a better understanding of the invention.

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Figure 7. - It shows, finally, a similar representation to that of the previous figure, in a partial stage of opening.

PREFERRED EMBODIMENT OF THE INVENTION

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[0021] In the light of the above figures it can be observed how the wrapping disclosed, like any conventional wrapping, is constituted by means of a layered laminar body (1), based on a paper inner sheet (2), an outer layer of aluminium (3) and an intermediate layer of adhesive (4), which joins them and stiffens them, which body has an outline in the form of a cyclic triangle capable of forming a conical body (5), open at its base, appropriate in form and dimensions to receive tightly on its interior the classic cone biscuit which holds the ice cream, and whose closing edge (6) conventionally has a flap (7), projecting outwards, by way of a grip.

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[0022] So, the wrapping of the invention, maintaining the basic structure mentioned, replaces the aforemen-

tioned classic flap (7) with an interior seam (8), of angular configuration whose edges (9-9') can be curved convexly, as in the example of practical embodiment of figures 1 to 3, but they could likewise be rectilinear, so that the upper edge (9) also constitutes in turn the edge of a marginal area (10) by way of recessed tab, as a grip and for tearing the wrapping.

[0023] Optionally the seams (8) can be two in number, to establish between them a more clearly defined tab, although preferably there will be a single seam (8), with the object that the vertex (11) of the same acts as a tear guide which facilitates a correct opening of the wrapping when the marginal area or tab (10) is pulled.

[0024] As can be deduced from that explained above, is appreciated from observation of figures 1 to 3 and as has already been pointed out previously, this special structure for obtaining the tab (10) not only signifies a substantial saving in material, it also assures a perfect fitting of the tab to the actual cone and an immobilization of the same with time, as long as it is not grasped specifically to carry out the opening operation, which avoids accidental deterioration of this tab, as well as the risk that in normal manipulation of the container, prior to the consumption of its contents, a loss of the seal could arise accidentally which places the ice cream product in contact with the exterior.

[0025] In figures 4 to 7 a variation of embodiment is shown wherein the closing edge (12) has a flap (13) projecting outwards, although as in the previous case it could be formed by the inner seam (8).

[0026] In any case, the cone biscuit (14) which can be seen in figure 7 can have any height lying between a partial cutting line (15) and the mouth (16) of the laminar wrapping.

[0027] Thus, in accordance with the opening arrangement of the invention, the paper inner sheet (2) is affected by the aforementioned cutting line (15), preferably circumferential, that is, parallel to the mouth (16) of the laminar wrapping, and logically located below the flap (13), so that when the latter is pulled the weakening of the laminar body (1) produced by that circumferential cutting line (15) causes the tearing of the wrapping to take place precisely along the same, that is, in a perfectly controlled manner with the arrangement foreseen for this purpose.

[0028] Complementarily, between the aforementioned circumferential cutting line (15) and the mouth (16) of the laminar wrapping, immediately after the classic adhesive strip (17) with which the laminar body (1) is closed on itself to form the conical wrapping, a second cutting line (18) is established which affects exclusively, like the previous one, the paper inner sheet (2), as shown in figure 5, so that in the eventuality that on pulling the flap (13) and due to the adhesive (17) a de-layering takes place between the paper (2) and the aluminium (3), this de-layering effect is interrupted when the aforementioned cutting line (18) is reached, and starting from it the tearing simultaneously and unavoidably af-

fects the two integral layers of the laminar body (1), as shown in figure 7.

[0029] Those partial cutting lines (15) and (18), can be implemented by mechanical cutting, using blades, by cutting by laser, or by any other means which is considered appropriate.

[0030] In any case one achieves, as has been previously stated, that the tearing of the laminar and conical wrapping (1) for access to the cone biscuit (14) inside, takes place in a perfectly controlled manner through the circumferential cutting line (15) foreseen for this purpose, and without the possibility that a de-layering of the laminar body (1) occurs with scraps of paper sticking to the cone biscuit (14) and/or to the conical remains of the laminar wrapping (1) which, delimited by the circumferential cutting line (15), should remain associated with the cone biscuit (14).

Claims

1. Laminar wrapping for cone type ice creams, of the type of those which are materialized, for example, in a laminar body based on a paper-aluminium composition, which shapes a conical body, empty, open at its base, in form and dimensionally appropriate for the cone biscuit which has to be held in its interior, **characterised in that** in substitution of the classic tab for opening, an external continuation of its closing edge, it incorporates a seam (8), of angular configuration, the upper side of this seam, that next to the mouth of the wrapping, being that which defines the tab (10) for tearing the wrapping.
2. Laminar wrapping for cone type ice creams, according to claim 1, **characterised in that** the pointed vertex (11) which constitutes the bottom of the angular seam (8), defines a tearing guide in the operation of opening the wrapping.
3. Laminar wrapping for cone type ice creams, according to previous claims, **characterised in that** optionally it incorporates two angular seams (8), relatively close, between which is defined the tab to be gripped for tearing the wrapping.
4. Laminar wrapping for cone type ice creams, of those which are materialized, for example, in a laminar body based on a paper-aluminium composition which shapes a conical body, empty, open at its base, in form and dimensionally appropriate for the cone biscuit which has to be held in its interior, in which said laminar body is closed on itself to configure the cone by means of an adhesive strip which is extended between the vertex and the open base of the same, a tab for gripping purposes being defined in the middle area of the closing edge for the subsequent opening of the wrapping, **character-**

ised in that the laminar body (1) incorporates, affecting its paper inner face (2), a continuous or discontinuous cutting line (15), located below the flap (13) for gripping purposes, so that in the opening operation and on pulling said flap (13) the tearing takes place unavoidably of the laminar body (1) in correspondence with said cutting line (15), preestablished for this purpose. 5

5. Laminar wrapping for cone type ice creams, according to claim 4, **characterised in that** the cutting line (15) is circumferential and parallel to the mouth (16). 10

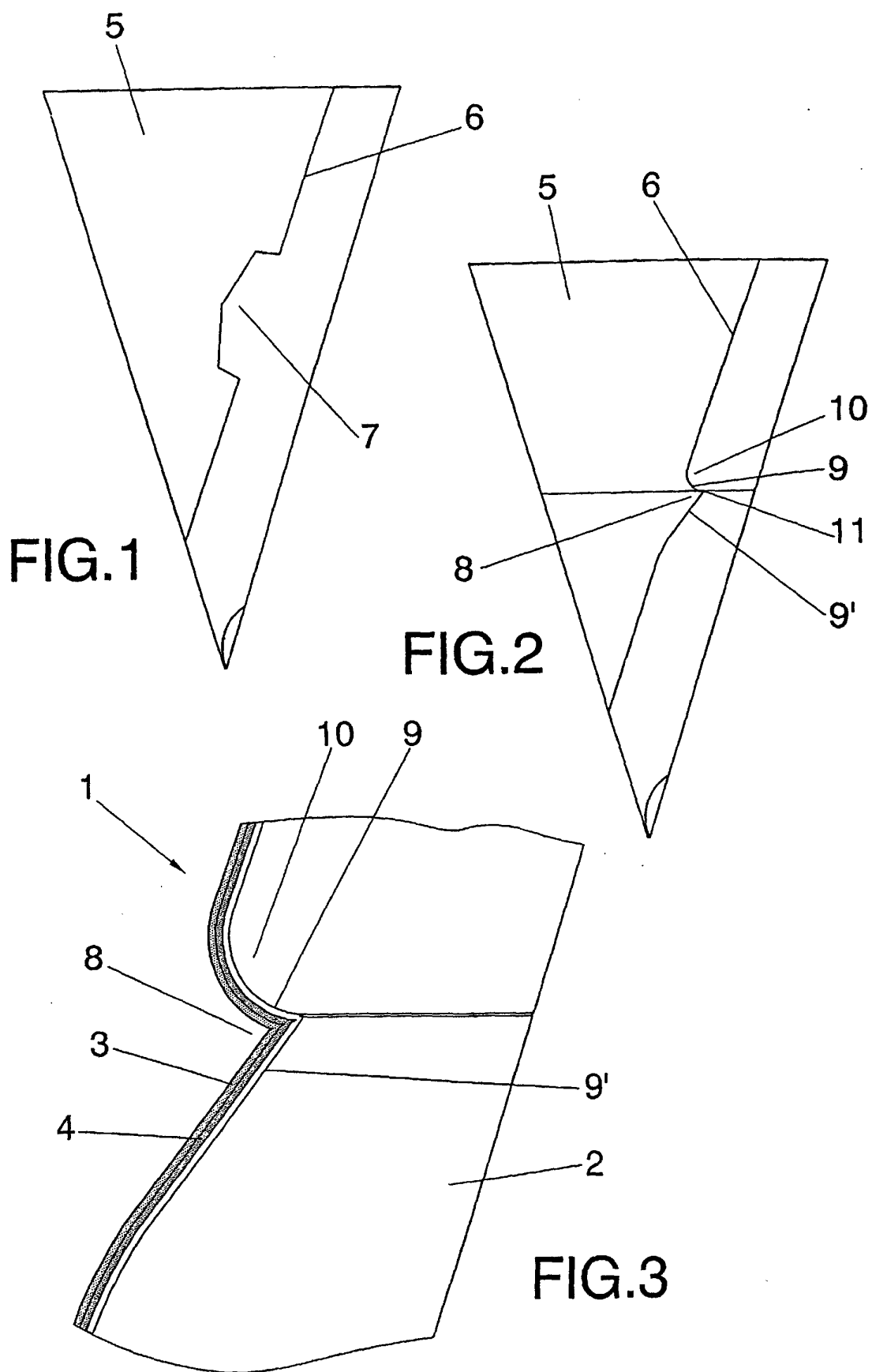
6. Laminar wrapping for cone type ice creams, according to claim 4, **characterised in that** the cutting line (15) is irregular. 15

7. Laminar wrapping for cone type ice creams, according to claim 4, **characterised in that** the cutting line (15) is implemented in spiral form, forming an angle with respect to the mouth (16). 20

8. Laminar wrapping for cone type ice creams, according to claim 4, **characterised in that** between the cutting line (15) mentioned and the mouth (16) of the wrapping a second cutting line (18) is established which also affects exclusively the paper inner sheet (2), parallel and next to the adhesive strip (17) which closes the laminar body (1) on itself, so that in the eventuality of a supposed de-layering between the paper and the aluminium in the opening of the wrapping, said de-layering is interrupted on reaching that second cutting line (18). 25 30 35

9. Laminar wrapping for cone type ice creams, according to claims 4 to 8, **characterised in that** the cutting lines (15) and (18), established in the paper inner layer (2) of the laminar body (1), are produced by means of mechanical cutting with blades, dies or by laser cutting. 40

10. Laminar wrapping for cone type ice creams, according to claims 1 and 4, **characterised in that** the laminar body (1) is formed by a single material or laminar combinations of two or more materials, like, for example, paper, plastic, treated papers or metals. 45 50 55



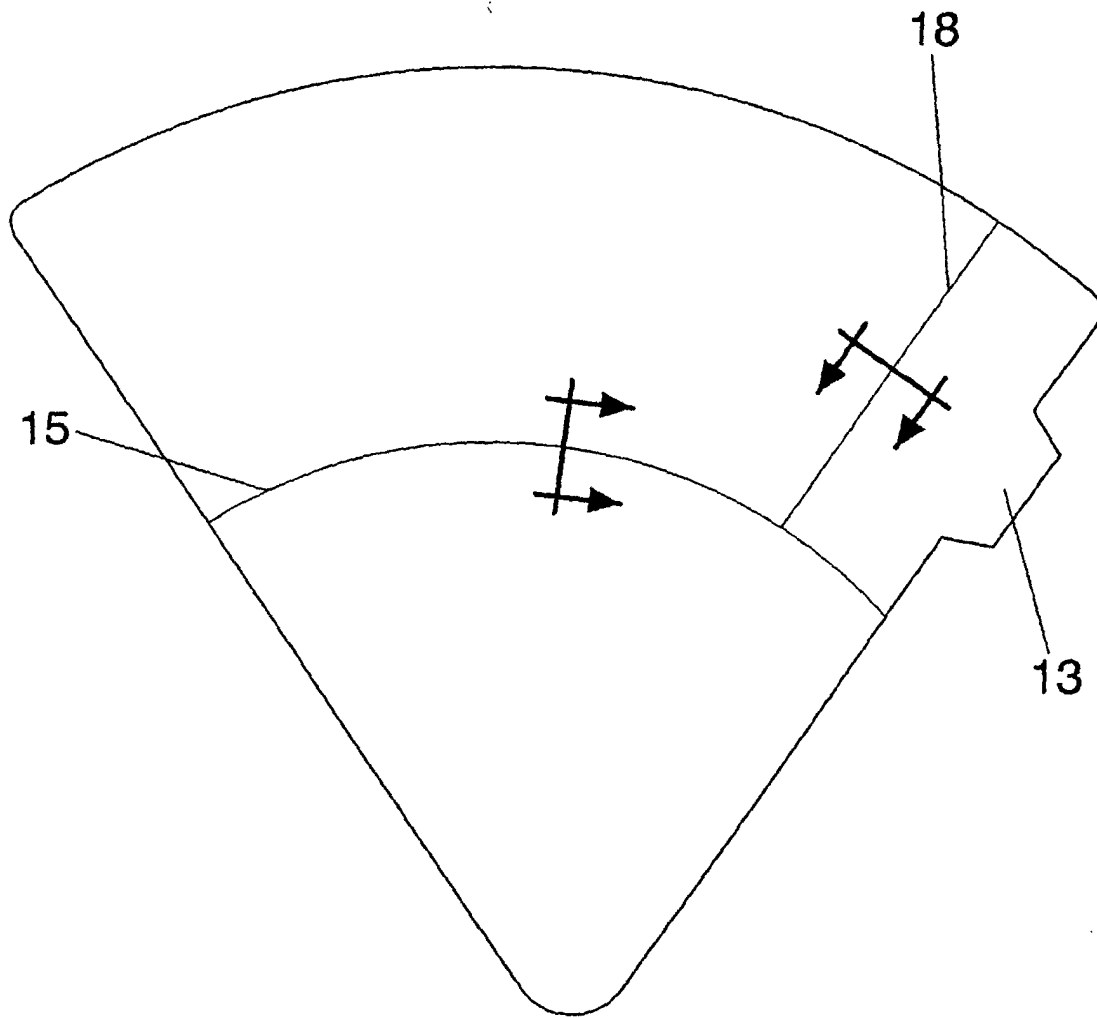


FIG. 4

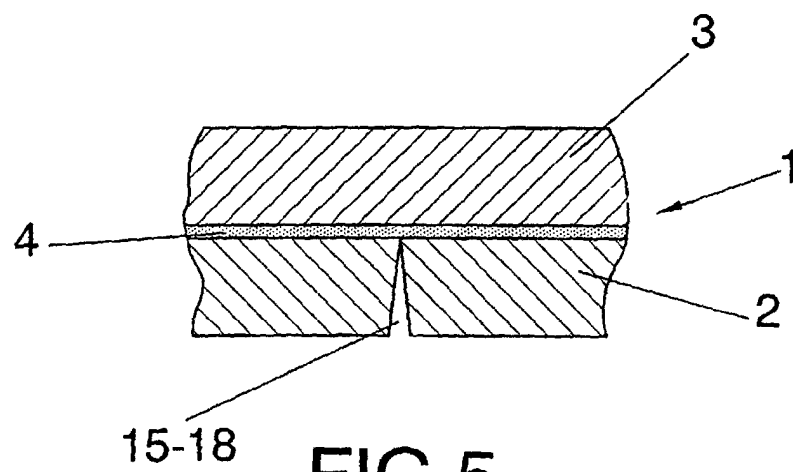
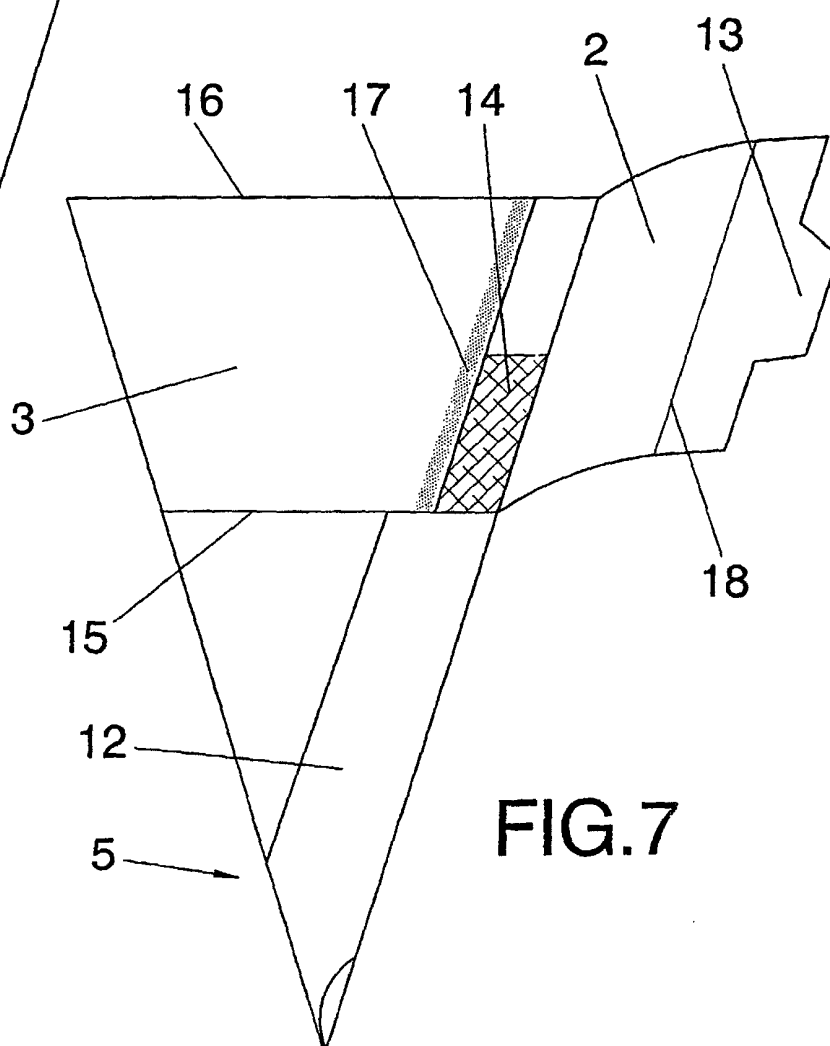
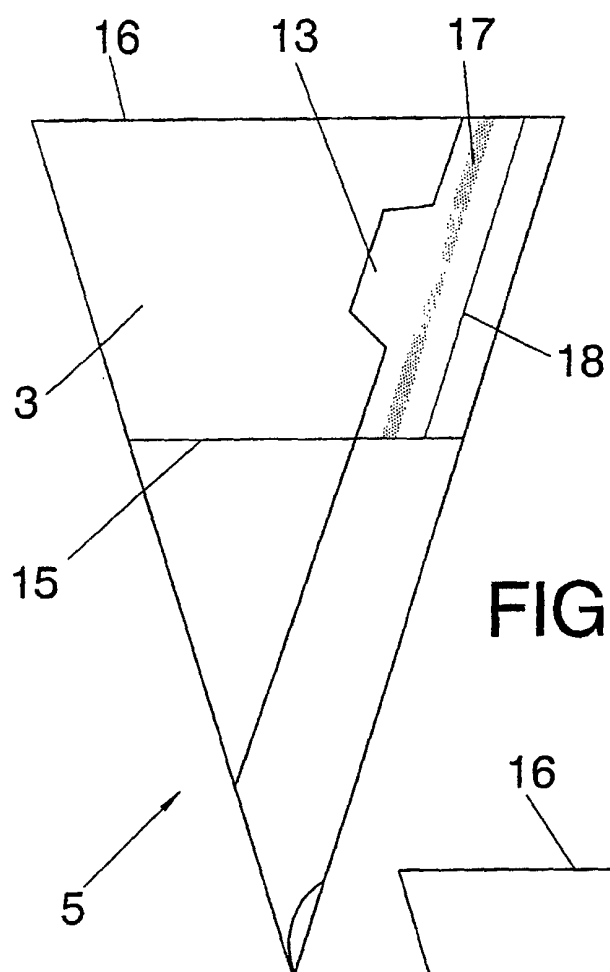


FIG. 5



INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES03/00064

A. CLASSIFICATION OF SUBJECT MATTER		
IPC ⁷ B65D 3/06, 3/26, 85/78		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC ⁷ B65D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
ES		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
CIBEPAT, EPODOC, WPI, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ES 2031062 T3 (4P VERPACKUNGEN RONSBERG GmbH) 01.12.1992, The whole document	1 - 3, 10
A	PATENT ABSTRACTS OF JAPAN, MIJP 9910, PAJ/2000 - 1 (061) (11-266601/11-299300) JP 11-278545 A (DAINIPPON PRINTING CO Ltd) 12.10.1999	1, 3
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☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
03 April 2003 (03.04.03)		10 April 2003 (10.04.03)
Name and mailing address of the ISA/ S.P.T.O.		Authorized officer
Facsimile No.		Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES03/00064

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN, MIJP 0004 PAJ/2000 - 7(067) (12 - 092901 /12-125600) JP 2000-109047 A (DAINIPPON PRINTING CO Ltd.) 18.04.2000.	1, 4, 5, 10
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A	US 2800267 A (O'NEILL) 23.07.1957 column 2, lines 9-68; figures	4
A	US 4657142 A (MIZOGUCHI) 14.04.1987, column 3, line 44- column 6, line 51; figures	1, 4
A	US 2966292 A (SAIDEL) 27.12.1960	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES03/00064

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

CLAIMS 1-3, 10**INVENTION RELATING TO THE USE OF A SLIT IN PLACE OF A FLANGE****CLAIMS 4-10****INVENTION RELATING TO THE CUTTING LINE IN THE INNER PAPER LAYER**

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
 Information on patent family members

 International Application No
 PCT/ES03/00064

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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