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BREVET D'INVENTION

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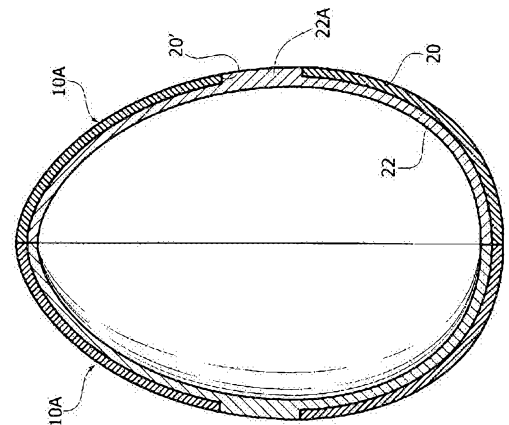
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Hollow confectionery product.

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Described herein is a confectionery product (10) having a hollow body (10A) formed by at least one first material that defines an outer surface of said product, wherein present on the outer surface is a second material, different from said first material, which reproduces a decorative element. The product is characterized in that said body comprises a first outer layer (20), formed by said first material, which comes to define a prevalent portion of said outer surface, and a second layer (22), formed by said second material, which is set internally, on said first layer, wherein said first layer (20) has an opening (20') that allows a portion (22A) of said second layer to emerge on said outer surface so as to form said decorative element

FIG. 2



"Hollow confectionery product"

Field of the invention

The present invention relates in general to hollow
5 confectionery products, and more in particular to
hollow confectionery products that present on their
outer surface decorations formed by an additional
material applied on the main body of the product.
Usually, products of this type are made of chocolate,
10 and the decorations are made with solidifiable doughs
and pastes of various kinds, for example sugar paste,
semi-finished products of a chocolate type with natural
colorants (for example, for decorations on Easter
eggs), coloured sugar-based compounds, etc.

15 Prior art

Figures 4A-4B and 5A-5B illustrate two known
solutions for producing a product of the type in
question.

The known solution illustrated in Figures 4A and
20 4B is typically implemented in home-type bakeries and
envisages a decorative element 102 that is applied on
the outer surface of the hollow body 104 so as to be in
relief with respect to the surface itself. The
decorative element is anchored to the surface of the
25 body 104 via a localized melting of the corresponding
parts in mutual contact, or else via adhesive pastes
commonly used in the foodstuff sector.

The solution of Figures 5A and 5B differs from the
one just described in that the decorative element 102'
30 is recessed in the wall of the hollow body 104' so as
to be flush with its outer surface. In this solution,
the hollow body and the decorative element are both
formed in one and the same moulding device, which
carries out in succession two pouring steps, the first
35 for the decorative element, and the second for the

hollow product, or vice versa. On account of the more complex production means that are required, this solution is prevalently used in the context of industrial processes.

5 It should now be noted that the solution of Figures 4A and 4B presents the drawback of arranging the decorative element 102 in a critical position as regards possible impact of the product with objects external to the product, since it is totally exposed,
10 thus risking being chipped, fractured, or damaged in some other way. Given the brittleness of the product, this solution is hence far from suited for a production of an industrial type.

The solution of Figures 5A and 5B overcomes at
15 least in part the aforesaid drawback thanks to the fact that the element 102 is inserted in the wall of the hollow body.

Summary and object of the invention

In any case, in the technical field here of
20 interest there is a constant search for solutions that will improve the quality of the product and will also be able to preserve the integrity thereof up to the final moment when the product is consumed.

The above object is achieved by a confectionery
25 product having the characteristics specified in Claim 1.

The claims form an integral part of the technical teaching provided herein in relation to the invention.

Brief description of the drawings and detailed
30 description of one or more embodiments of the invention

Further characteristics and advantages of the invention will emerge clearly from the ensuing description with reference to the annexed drawings, which are provided purely by way of non-limiting
35 example and in which:

- Figure 1 illustrates, according to an axonometric view, an example of the product described herein;

5 - Figure 2 is a cross-sectional view of the product of Figure 1 according to the plane of section II-II;

- Figures 3A and 3B illustrate a further example of the product described herein, according to an axonometric view and a cross-sectional view,
10 respectively;

- Figures 4A and 4B illustrate a solution of the prior art, according to an axonometric view and a cross-sectional view, respectively;

15 - Figures 5A and 5B illustrate a further solution of the prior art, according to an axonometric view and a cross-sectional view, respectively.

In the ensuing description, various specific details are illustrated aimed at providing an in-depth understanding of the embodiments. The embodiments may
20 be obtained without one or more of the specific details, or with other methods, components, or materials, etc. In other cases, known structures, materials, or operations are not illustrated or described in detail so that various aspects of the
25 embodiments will not be obscured.

The references used herein are provided merely for convenience and hence do not define the sphere of protection or the scope of the embodiments.

30 First of all, it is to be noted that by the term "hollow product" as used herein is meant any product formed by a shell having a generic concave conformation, whether closed or open. This product may thus be, for example, an Easter egg, a chocolate bell, a hollow figure in the form of a squirrel, Santa Claus,
35 a snowman, etc. On the other hand, as will be seen in

what follows, even though chocolate products are the main sphere of application envisaged by the present applicant for the solution presented herein, in effect this solution may advantageously be used also for other
5 types of products, such as semi-finished products of similar type, sugar paste, wafer products, etc.

The hollow product described herein differs from the known solutions illustrated above in that the decorative element is obtained through a layer of
10 material that is applied internally on the wall of the product and that emerges, with a portion thereof, on the outer surface, through an opening made in the wall itself.

In general, the product described herein has a
15 hollow body comprising:

- an outer layer, formed by a first material, which comes to define a prevalent portion of the outer surface of the product; and
- a second layer, formed by a second material,
20 which is set internally, on the first layer,

wherein the first layer has an opening that allows a portion of the second layer to emerge on the outer surface, this portion forming the decorative element of the product.

25 As will become evident in what follows, thanks to this configuration, the decorative element of the product described herein is firmly connected to the wall of the hollow body, i.e., to the aforesaid outer layer, not only, simply, by adhesion between materials,
30 but also, and above all, through the coupling, which is, in effect, of a mechanical type, that is established between the outer wall and the inner layer on which the decorative element is obtained.

To facilitate understanding of the solution
35 described herein, reference will now be made to Figures

1 and 2, which represent an example of product according to this solution.

The product illustrated, as a whole designated by the reference number 10, is a chocolate egg constituted by two half-shells 10A that both present on their outer surface the letter K. This letter will be clearly of a colour different from the remaining part of the outer surface of the product, so that it can be distinguished therefrom.

10 To reproduce the letter K referred to above, each of the two half-shells 10A has:

- an outer wall 20 made of chocolate, in which a through opening 20' is obtained that has a profile corresponding to the shape of the letter K reproduced;
- 15 - an inner layer 22 made of different material, which is applied on the inner side of the wall 20, coating it totally, and, moreover, comes to fill completely the cavity of the opening 20', with a portion 22A thereof that comes to be flush with the
- 20 outer surface of the wall 20.

With the aforesaid portion 22A the layer 22 reproduces the decorative element, represented, in the case in point, by the letter K.

The material of the inner layer 22 is different at least in colour from the chocolate material of which the wall 20 is made. This material may itself be chocolate or else material of some other type.

With particular reference now to Figure 2, it will be noted that the portion 22A contained within the opening 20' of the outer wall 20 is to all effects withheld in its seat from inside via the entire layer 22 that rests against the inner side of the wall 20.

The connection thus obtained between the decorative element and the hollow body of chocolate is practically indissoluble. Incidentally, it should be

noted that the inner layer 22 may also present a smaller extension than the inner surface of the wall 20 and hence coat only a portion of the aforesaid surface.

5 The present applicant has found, in general, that the above configuration not only prevents detachment of the decorative element from the outer shell, but in effect also strengthens the decorative element itself.

10 Among other things, the solution described herein also enables provision of different decorative elements arranged on top of one another, without any problem of detachment due to the incompatibility of the materials in regard to mutual adherence.

15 In this connection, Figures 3A and 3B illustrate a product similar to that of Figures 1 and 2 (the parts in common are designated by the same reference numbers), where on the layer 22, which forms the first decorative element 22A, a further layer 32 is applied that comes to define a second decorative element 32A, having the shape of a circle, according to the same modality described above. In particular, the layer 22 has itself a through opening 22', and the layer 32 applied thereon comes to fill completely the cavity of the opening with its portion 32a, thus remaining flush with the outer surface of the portion 22A (or else even 20 projecting beyond the surface). The layer 32 will be made of a different material, at least as regards colour, both with respect to the layer 22 and with respect to the wall 20.

25 As may be seen in Figure 3B, in this case the layer 32 is applied on the inner side of the layer 22, coating it only partially.

In the final analysis, the product described herein presents, as compared to known solutions, as less subject to defects of production or to the risk of

breaking, and hence constitutes a product of higher quality.

As mentioned previously, the solution described herein may be used for any hollow product and not only
5 for chocolate products. In general, this solution may be used with any mouldable foodstuff material, i.e., one that can be formed in a mould. Some examples are represented by chocolate surrogates, sugar syrups, wafers or other materials for baking products.

10 With reference now to the method of production of the product described herein, it will be clear for the person skilled in the sector that it will envisage two distinct operations of moulding (or modelling), one for the outer wall and the other for the inner layer, as is
15 already the case for the production of the known solutions referred to at the start. It is in particular preferable to obtain first the outer wall and its opening, and then form thereon the inner layer, which comes to fill the aforesaid opening as illustrated
20 above.

For the production of the outer wall provided with an opening, it is possible to envisage a first operation of pouring into the mould the material constituting the outer shell, followed by a subsequent
25 step of turning over the mould to enable dripping-off thereof, then making the opening with closed rim using a purposely designed punch when the chocolate has a structure that is still soft. Alternatively, there may be adopted techniques of moulding with use of an
30 appropriately configured mould and counter-mould, which provide the outer half-shell having an opening with closed rim. To obtain the inner wall connected to the decoration, the aforesaid conventional technology of pouring and dripping of the mould may be used, or else

the technology that envisages the use of a mould and counter-mould.

The forming techniques referred to above are altogether conventional, so that a detailed treatment
5 thereof is not necessary herein.

Of course, without prejudice to the principle of the invention, the details of construction and the embodiments may vary, even significantly, with respect to what has been illustrated herein purely by way of
10 non-limiting example, without thereby departing from the scope of the invention, as is defined by the annexed claims.

BL-5032

REVENDEICATIONS

1. Produit de confiserie (10) ayant un corps creux (10A) formé par au moins un premier matériau qui définit une surface externe dudit produit, dans lequel, est présent sur la surface externe elle-même dudit produit creux un deuxième matériau, différent dudit premier matériau, qui reproduit un élément décoratif,
5 ledit produit étant caractérisé en ce que ledit corps comprend une première couche externe (20), formée par ledit premier matériau, qui a pour but de définir une partie dominante de ladite surface externe, et au moins une deuxième couche (22), formée par ledit deuxième matériau, qui est mise en place de manière interne, sur ladite première couche, dans lequel ladite
10 première couche (20) a une ouverture (20') qui permet à une partie (22A) de ladite deuxième couche d'émerger sur ladite surface externe, de manière à former ledit élément décoratif.

2. Produit selon la revendication 1, dans lequel ladite partie (22A) est logée
15 à l'intérieur de ladite ouverture (20'), et dans lequel ladite partie (22A) et ladite ouverture (20') ont des profils correspondants, fournissant ainsi un ajustement de formes mutuel.

3. Produit selon la revendication 2, dans lequel le côté externe de ladite
20 partie (22A) est aligné avec la surface externe de ladite première couche (20).

4. Produit selon l'une quelconque des revendications précédentes, dans lequel ladite deuxième couche (22) couvre le côté interne de ladite première couche (20) totalement.
25

5. Produit selon l'une quelconque des revendications 1 à 4, dans lequel ladite deuxième couche (22) ne couvre le côté interne de ladite première couche (20) que partiellement.

6. Produit selon l'une quelconque des revendications précédentes, comprenant un corps creux supplémentaire (10A) couplé audit premier corps creux (10A), ledit premier corps et ledit corps supplémentaire formant conjointement une coque fermée.

5

7. Produit selon l'une quelconque des revendications précédentes, dans lequel au moins ledit premier matériau est du chocolat.

8. Produit selon l'une quelconque des revendications précédentes, dans lequel ledit deuxième matériau est un succédané de chocolat ou autrement du sirop de glucose déshydraté.

10

FIG. 1

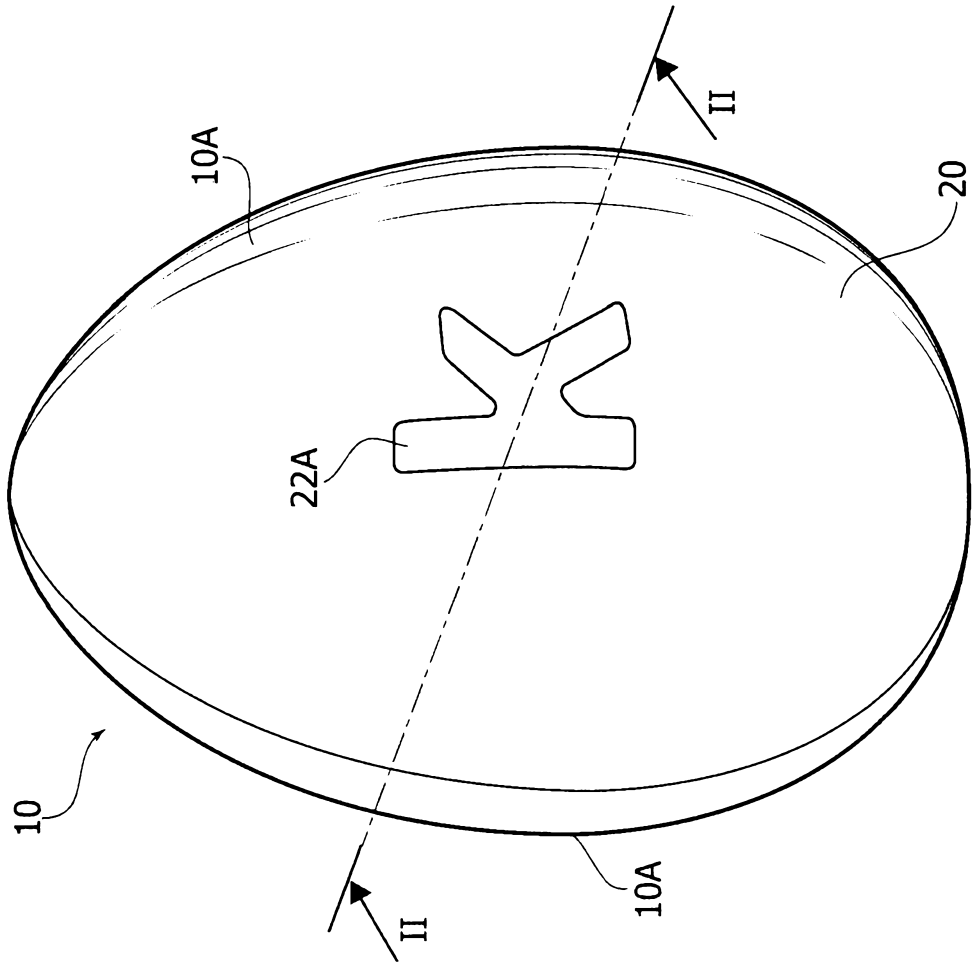


FIG. 2

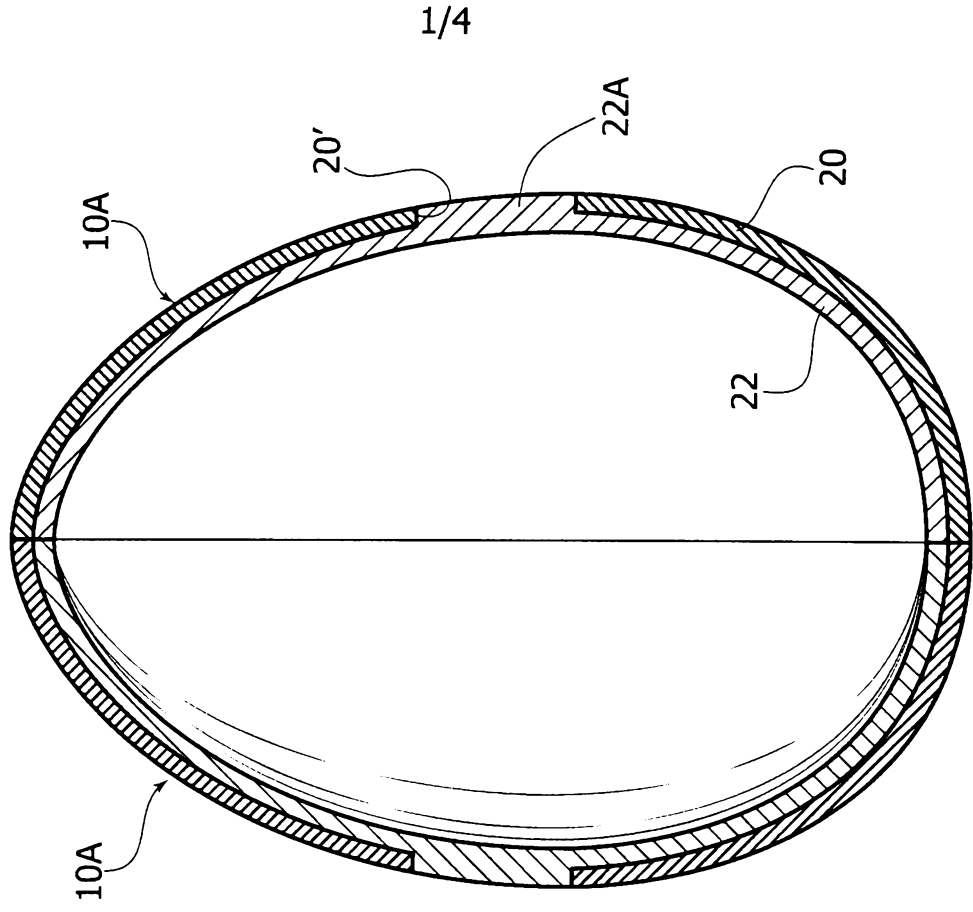


FIG. 3A

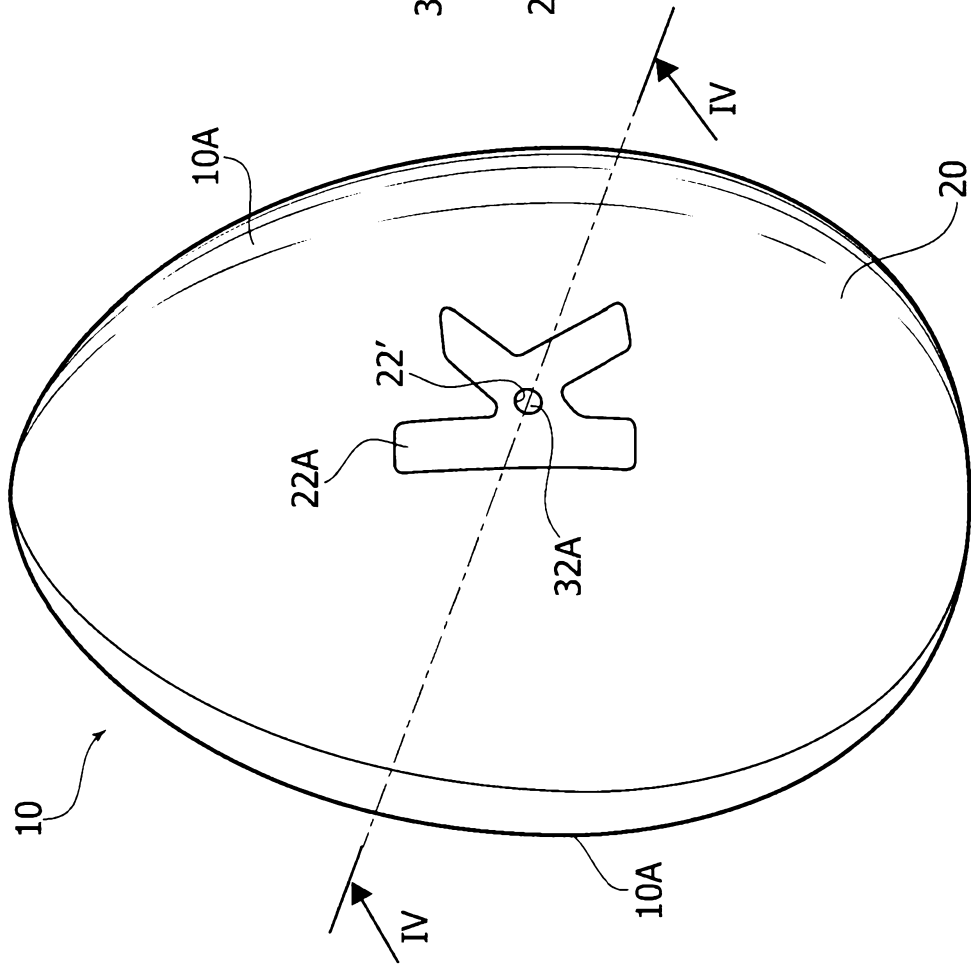


FIG. 3B

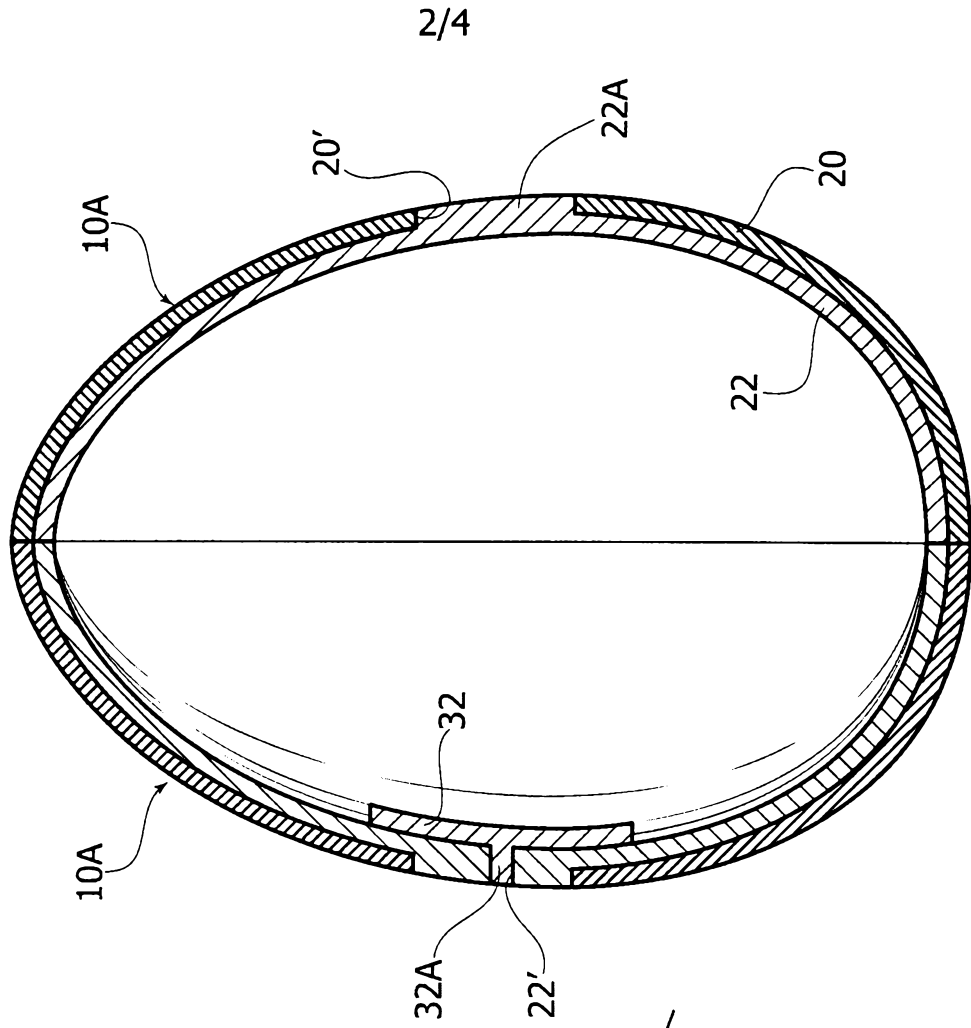


FIG. 4B

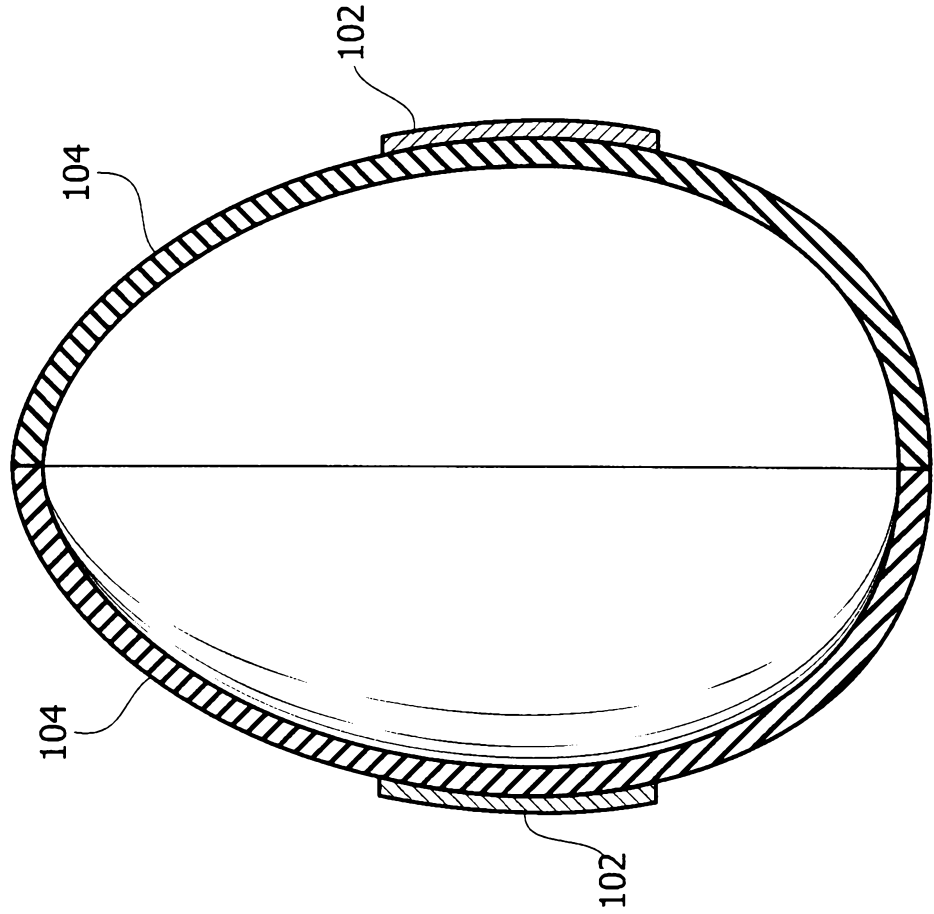


FIG. 4A

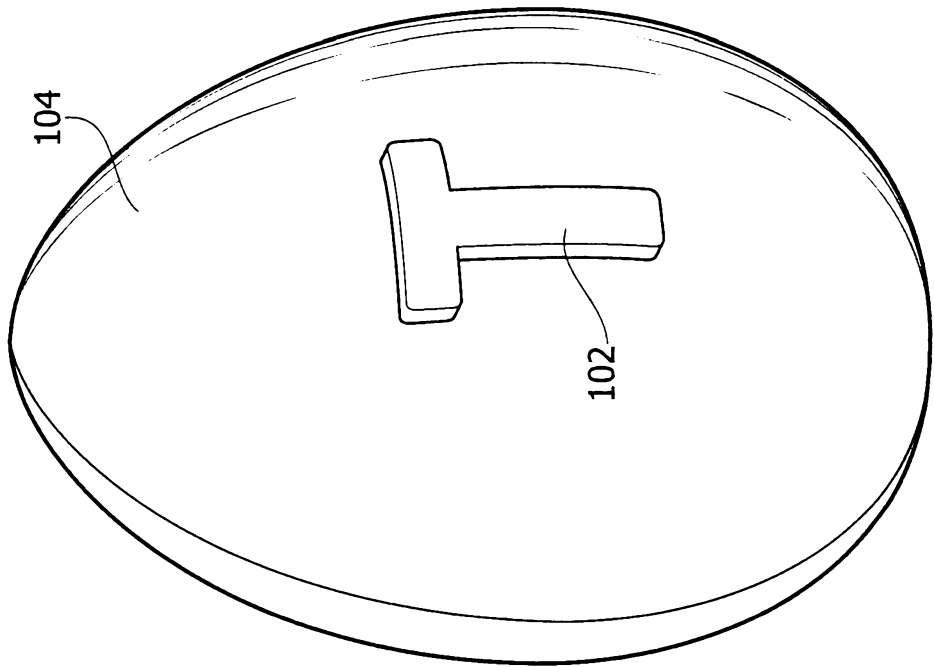


FIG. 5A

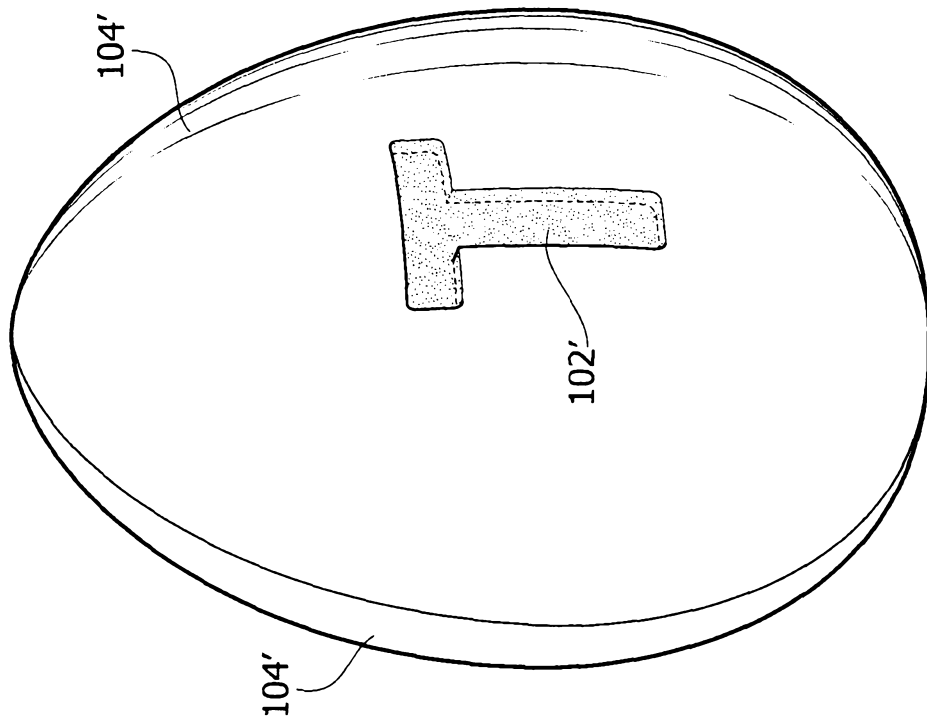
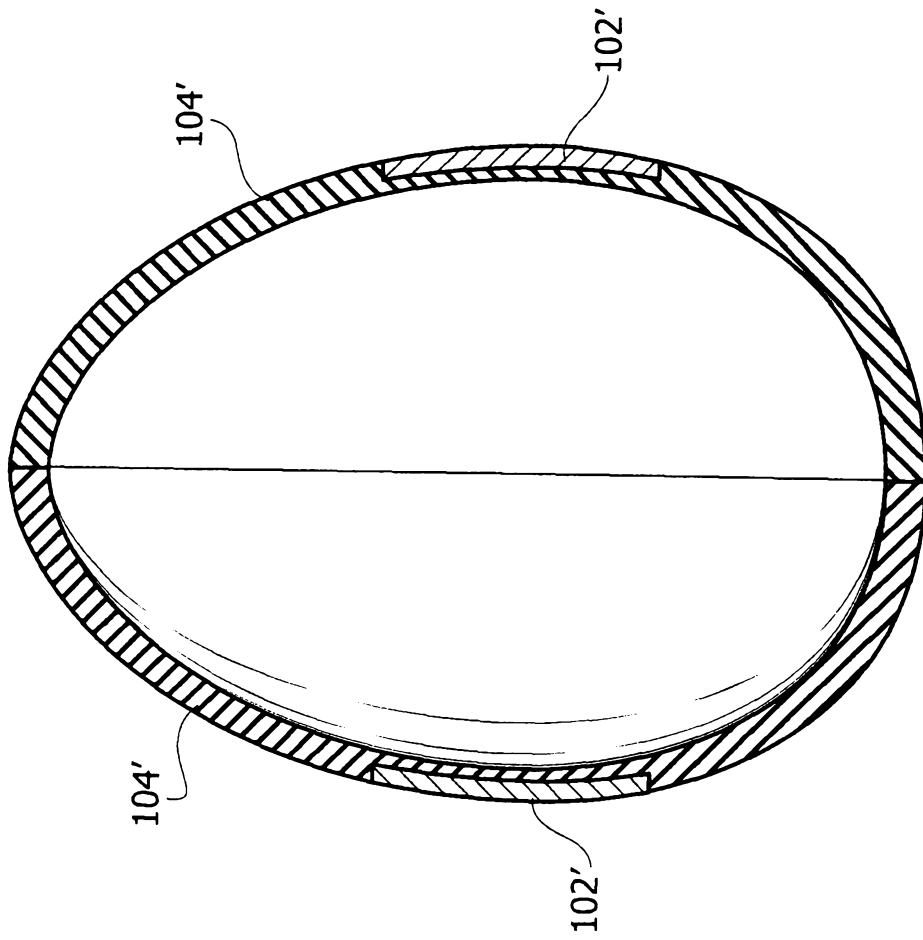


FIG. 5B



ABSTRACT

Described herein is a confectionery product (10) having a hollow body (10A) formed by at least one first material that defines an outer surface of said product, wherein present on the outer surface is a second material, different from said first material, which reproduces a decorative element.

The product is characterized in that said body comprises a first outer layer (20), formed by said first material, which comes to define a prevalent portion of said outer surface, and a second layer (22), formed by said second material, which is set internally, on said first layer, wherein said first layer (20) has an opening (20') that allows a portion (22A) of said second layer to emerge on said outer surface so as to form said decorative element.

(Figure 2)



SEARCH REPORT
in accordance with Article 35.1 a)
of the Luxembourg law on patents
dated 20 July 1992

LO 1634
LU 100167

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 1 865 097 A (GILHAM DILMAN C) 28 June 1932 (1932-06-28) * the whole document *	1-8	INV. A23G1/54 A23G1/21 A23G3/02
A	GB 1 427 496 A (FERRERO & C SPA P) 10 March 1976 (1976-03-10) * the whole document *	1-8	A23G3/54 A23G9/48
A	EP 1 604 573 A1 (SWEET SPA [IT]) 14 December 2005 (2005-12-14) * the whole document *	1-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			A23G
The present search report has been drawn up for all claims			
		Date of completion of the search	Examiner
		20 December 2017	Bondar, Daniela
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	

**ANNEX TO THE SEARCH REPORT
ON LUXEMBOURG PATENT APPLICATION NO.**

LO 1634
LU 100167

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-12-2017

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1865097	A	28-06-1932	NONE	

GB 1427496	A	10-03-1976	BE 818083 A	18-11-1974
			CA 1012003 A	14-06-1977
			DE 2435682 A1	20-02-1975
			FR 2239207 A1	28-02-1975
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			IT 991904 B	30-08-1975
			US 3961089 A	01-06-1976

EP 1604573	A1	14-12-2005	AT 489854 T	15-12-2010
			EP 1604573 A1	14-12-2005
			ES 2357353 T3	25-04-2011



WRITTEN OPINION

File No. LO1634	Filing date (day/month/year) 10.04.2017	Priority date (day/month/year)	Application No. LU100167
International Patent Classification (IPC) INV. A23G1.54 A23G1.21 A23G3.02 A23G3.54 A23G9.48			
Applicant SOREMARTEC S.A.			

This report contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the application
- Box No. VIII Certain observations on the application

Form LU237A (Cover Sheet) (January 2007)	Examiner Bondar, Daniela
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WRITTEN OPINION

Application No.
LU100167

Box No. I Basis of the opinion

1. This opinion has been established on the basis of the latest set of claims filed before the start of the search.
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the application as filed.
 - filed together with the application in electronic form.
 - furnished subsequently.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty	Yes: Claims	2-8
	No: Claims	1
Inventive step	Yes: Claims	
	No: Claims	1-8
Industrial applicability	Yes: Claims	1-8
	No: Claims	
2. Citations and explanations
see separate sheet

WRITTEN OPINION

Application No.
LU100167

Box No. VIII Certain observations on the application

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1 US 1 865 097 A (GILHAM DILMAN C) 28 June 1932 (1932-06-28)

1. Lack of novelty

The present application does not meet the criteria of patentability, because the subject-matter of claim 1 is not new.

Document D1 discloses a confectionery product having a hollow body formed by at least one first material that defines an outer surface, wherein on the outer surface is a second material, different from said first material, which reproduces a decorative element. The first outer layer (3) (dark chocolate) has an opening that allows a portion of the second layer (4) (light chocolate) to emerge on said outer surface and to form a decorative element.

Therefore, the subject-matter of claim 1 is not new.

2. Lack of inventive step

The present application does not meet the criteria of patentability, because the subject-matter of claims 1-8 does not involve an inventive step.

Having regard to the claimed product and the prior art known (D1), it is considered that the man skilled in the art would regard the product of the present invention (as far as novel) as an obvious alternative to those known. Therefore, unless an unexpected effect for the present product (as far as novel) over the prior art disclosure from D1 can be demonstrated, the product does not fulfill the requirements of patentability.

Dependent claims 2-8 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of novelty and/or inventive step.

Re Item VIII

Certain observations on the application

a. In terms of technical features claim 1 is regarded as a confectionery product having a hollow body formed by at least a first material that defines an outer surface and a second material different from said first material, said second material emerging on the outer surface to form a decorative element.