



(11)

EP 3 682 772 A1

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
22.07.2020 Bulletin 2020/30

(51) Int Cl.:
A47G 21/04 (2006.01) **A47G 21/02** (2006.01)
A47G 21/00 (2006.01)

(21) Application number: **20382018.8**

(22) Date of filing: **15.01.2020**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **Copy Valls Con Gelats, S.L.**
43432 Reus (Tarragona) (ES)

(72) Inventor: **FERRANDIZ CERVILLA, Manuel Luis**
43432 REUS (TARRAGONA) (ES)

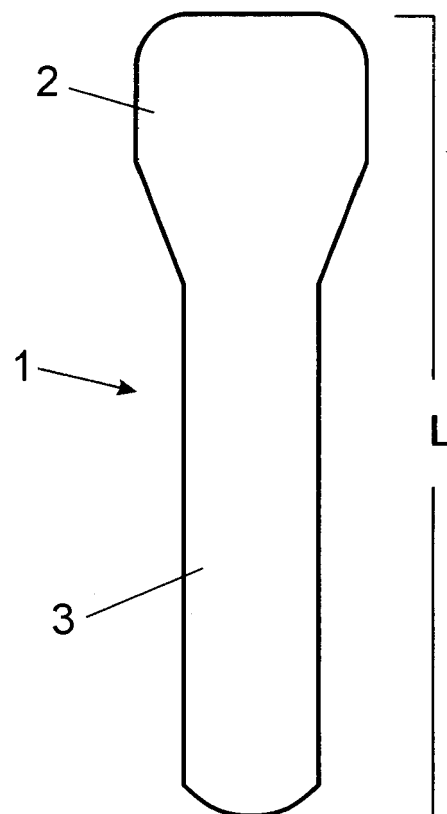
(74) Representative: **Espiell Gomez, Ignacio**
R. Volart Pons y Cia., S.L.
Pau Claris, 77 2^o 1^a
08010 Barcelona (ES)

(30) Priority: **18.01.2019 ES 201930092 U**

(54) **CARDBOARD CUTLERY IMPLEMENT**

(57) Cardboard cutlery implement made out of a body composed of a plurality of layers of cardboard (4) joined to each other and coated as a whole with a layer of water-based flexographic ink (5) for food use that endows it with resistance to the pressure and humidity. Preferably, the layers of cardboard (4) are joined to each other with water-based food glue. Preferably, it is a teaspoon 95 to 190 mm long (L), formed by a single piece the perimetral shape thereof defines the head (2) and the handle (3), formed out of 9 layers of cardboard (4) joined to each other with water-based food glue and coated with a layer of flexographic ink. (5).

FIG. 1



Description

OBJECT OF THE INVENTION

[0001] The invention, as stated in the title of this specification, refers to a cardboard cutlery implement that provides the function to which it is designed with advantages and characteristics, that are disclosed in detail thereafter, that mean an improvement of the current state-of-the art.

[0002] The object of this invention refers, concretely to a single-use cutlery implement, preferably a teaspoon that, mainly applicable for its use in the professional sector of ice-cream and restaurant industry, although others are not discarded, such as food product industry of canned and ready-to-eat products or that of household single-use cutlery, offer the advantage of being fully ecological as it is made of carboard, concretely out of a plurality of layers of carboard joined to each other and coated with a special layer of water-based flexographic ink that, in addition to a great strength and multiple printing possibilities of ornament and color, endows it with a bright finish that makes it impermeable and provides a smooth and soft surface, suitably pleasant for its use, similar to that of any metal or plastic cutlery implement.

FIELD OF APPLICATION OF THE INVENTION

[0003] The field of application of this invention is within the sector of industry engaged in the production of single-use utensils, namely focused in the scope of cutlery implements, for example spoons and teaspoons.

BACKGROUND OF THE INVENTION

[0004] As it is known, the use of single-use products that are not perfect and easily degradable is a growing serious problem to the environment because, thousands of them are daily used.

[0005] One example of them are the cutlery implements, for instance the teaspoons used in the sector of ice-cream industry to accompany the sale of ice-creams, or in the sector of the restaurant industry in general, to stir coffees and every type of beverages, as well as in the sector of food product industry that, is commercializing, every time with a growing volume, any type of packages for ready-to-eat food to which the cutlery implements are accompanied, that use to be made of plastic material.

[0006] The objective of this invention is, therefore, to provide another alternative to the said type of cutlery implements by means of developing a new product that, while offering the same benefits as the plastic cutlery implements, is fully ecological, being to that purpose made of cardboard, for which the problem of using the said material has been technically overcome in a product that, for its use, has to be mechanically resistant to a certain level of force exerted on it and, above all, structurally to the humidity, because in many cases it shall

serve to be introduced in liquids and anyway it shall have to stand the humidity of the mouth of the user.

[0007] On the other hand, and as reference to the current state-of-the-art, it shall be pointed out that, at least the applicant is not aware of the existence of any other cardboard cutlery implement or any other invention having a similar application, that possesses technical, structural and constitutive features equal or similar to those that the one herein claimed possesses.

EXPLANATION OF THE INVENTION

[0008] The cardboard cutlery implement that the invention proposes is configured as the suitable solution to the above-mentioned objective, the characterizing details that make it possible and that distinguish it conveniently appears in the final claims attached to this description.

[0009] More concretely, what the invention proposes, is a single-use cutlery implement, preferably a teaspoon that, mainly designed to its use in the professional sector of ice-cream and restaurant industry, without the food product industry of canned and ready-to-eat foods or within the household scope is discarded, is a fully ecological, compostable and bio-sustainable product as it is made of cardboard.

[0010] To that purpose, the said teaspoon is made out of a body composed of a plurality of layers of carboard joined to each other and coated as a whole with a special layer of water-based flexographic ink for food use, that means, applicable by means of a flexographic printing system, which provides the teaspoon or cutlery implement involved with the resistance required to pressure and humidity making its use possible.

[0011] Preferably, the cutlery implement, that in the preferred embodiment is a teaspoon, is formed out of 9 layers of cardboard providing it a total weight of 980gr/m². The said layers are joined to each other with water-based food glue. And the whole assembly is coated with a layer of flexographic ink that, preferably is the Aquapak® brand commercialized by the Flint company, consisting in a system of water-based high resistant flexographic ink designed for its application as a coating treatment of polyethylene on cardboard, providing a highly bright finish, large printing capacity and high blocking resistance, as well as the maximum capacity of chemical and product resistance required for its use in products such as milk, juice and ice-cream.

[0012] Preferably, the teaspoon is formed by a single piece, the perimetral shape of which defines the head and the handle, it can have different sizes and shapes, as well as being fully flat, best fitted for its use with ice-creams, or curved-concave shaped, similar to the conventional soup spoons or teaspoons.

[0013] Anyway, the said composition of the cutlery implement, with the said layers of cardboard and the coating of the described flexographic ink, in addition to high resistance and multiple possibilities of printing ornament and color, endows it with a bright finish that, in addition

to the impermeability provides a smooth and soft surface, suitably pleasant to be used, as it is similar to the surface that the any other metal or plastic cutlery implement possesses.

DESCRIPTION OF THE DRAWINGS

[0014] To complement the description that is being made and in order to assist to best understanding the characteristics of the invention, attached to this specification, as an integral part thereof, there are some drawings in which, for illustration and no limitation purpose, the following has been represented:

The figures numbers 1 and 2.- They show elevation front and side views, respectively, of a first example of the cardboard cutlery implement object of the invention, concretely a fully flat teaspoon;

the figures numbers 3 and 4.- They also show, in front and side view, respectively, another example of the cutlery implement of the invention, in this case a teaspoon having an angled head; and

the figure number 5.- It shows an enlarged view of a sectioned portion of the cardboard cutlery implement, according to the invention, showing the layers and elements of which, it is made.

PREFERRED EMBODIMENT OF THE INVENTION

[0015] At the sight of the said figures and according to the numerals adopted, in them, no limiting examples of embodiment of the cardboard cutlery implement preconized can be seen, comprising what is disclosed in detail below.

[0016] Thus, as it can be seen in the said figures, the cutlery implement (1) involved is a single-use cutlery implement, for example a teaspoon having a head (2) and handle (3), fully ecological, compostable and bio-sustainable, that is distinguished by being made out of a body composed of a plurality of layers of cardboard (4) joined to each other and coated as a whole with a special layer of water-based flexographic ink (5) for food use, that endows it with the resistance necessary to the pressure and humidity that makes its use possible.

[0017] Preferably, the said body with which the cutlery implement (1) is made is formed out of 9 layers of cardboard (4) providing it a total weight of 980gr/m², preferably joined to each other with water-based food glue and also preferably, the layer of flexographic ink (5) coating it is flexographic ink of Aquapak® brand of the Flint company.

[0018] In the preferred embodiment, the cutlery implement (1) is a teaspoon, 95 to 190 mm long (L) and is formed by a single piece the perimetral shape of which defines the head (2) and the handle (3), formed out of 9 layers of cardboard (4) joined to each other with water-

based food glue and coated with a layer of Aquapark® flexographic ink (5), that can have different shapes, as well as being fully flat, as it is shown in the example of the figures 1 and 2, or a curved-concave shape as in the example of the figures 3 and 4.

[0019] Sufficiently disclosed the nature of this invention, as well as the manner of implementing, it is not deemed necessary to extend any longer its explanation in order that any person skilled in the art understands its extend and the advantages arising from it.

Claims

1. Cardboard cutlery implement that, consisting in a single-use cutlery implement, for example a teaspoon with head (2) and handle (3), ecologic, compostable and bio-sustainable, is **characterized by** being made out of a body composed of a plurality of layers of cardboard (4) joined to each other and coated as a whole with a layer of water-based flexographic ink (5) for food use that endows it with resistance to the pressure and the humidity.
2. Cardboard cutlery implement, according to the claim 1, **characterized by** the fact that the said body is formed out of 9 layers of cardboard (4) that provides it a total weight of 980gr/m².
3. Cardboard cutlery implement, according to the claim 1 or 2, **characterized by** the fact that the said layers of cardboard (4) are joined to each other by water-based food.
4. Cardboard cutlery implement, according to the claim 1, **characterized** as it is a teaspoon 95 to 190 mm long (L), formed by a single piece the perimetral shape of which defines the head (2) and the handle (3), formed out of 9 layers of cardboard (4) joined to each other by water-based food glue and coated with a layer of flexographic ink. (5).

FIG. 1

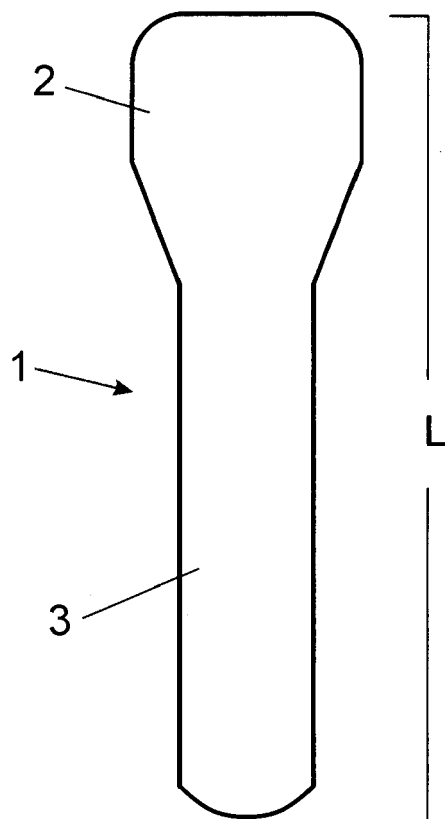


FIG. 2

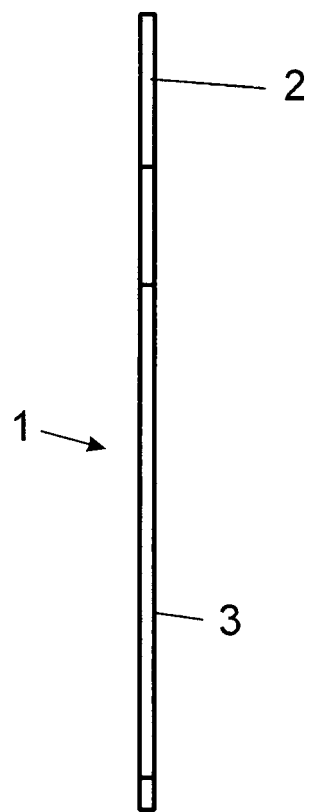


FIG. 3

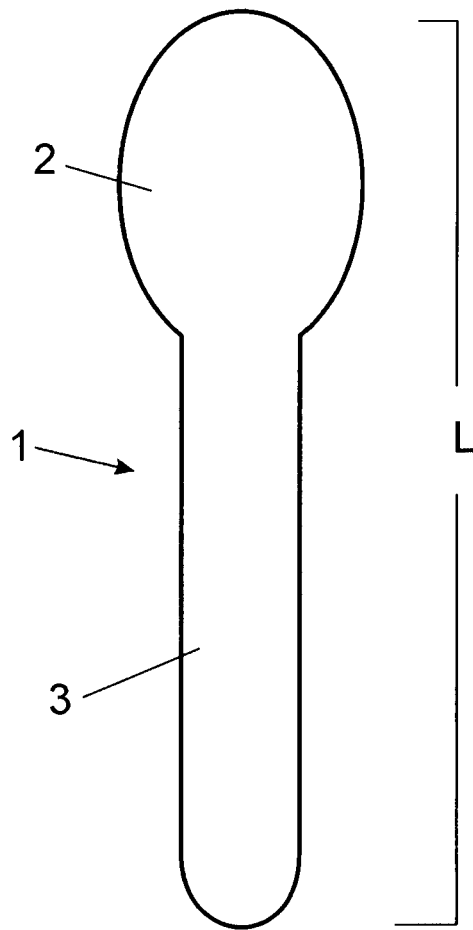


FIG. 4

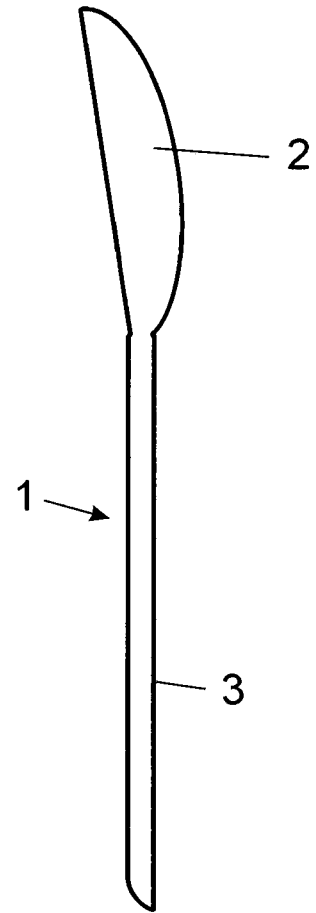
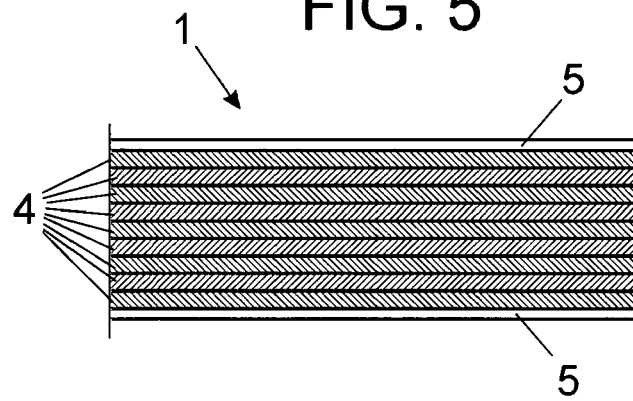


FIG. 5





EUROPEAN SEARCH REPORT

Application Number
EP 20 38 2018

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	WO 91/08086 A1 (SANDERS W A PAPIER [NL]) 13 June 1991 (1991-06-13) * page 1, lines 22-31 - page 5, lines 27,28; figures 1-9 * * page 6, lines 24,25 *	1,3	INV. A47G21/04 A47G21/02 A47G21/00
Y	JP 4 355283 B2 (DAIO SEISHI KK) 28 October 2009 (2009-10-28) * paragraphs [0019], [0029], [0036]; figures 1,2 *	1-4	
Y	US 2003/173366 A1 (LITTLEJOHN MARK B [US] ET AL) 18 September 2003 (2003-09-18) * abstract * * paragraph [0151] *	1-4	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 May 2020	Examiner Longo dit Operti, T
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			

EPO FORM 1503 03/82 (P04C01)

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

EP 20 38 2018

5

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.

06-05-2020

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9108086	A1	13-06-1991	NONE

JP 4355283	B2	28-10-2009	JP 4355283 B2 28-10-2009
		JP 2006168283 A	29-06-2006

US 2003173366	A1	18-09-2003	CA 2416972 A1 23-07-2003
		EP 1332972 A2	06-08-2003
		US 2003173366 A1	18-09-2003

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82