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(54) **DISPOSABLE PAPER SPOON FOR ICE CREAM AND SIMILAR SOLID FOODSTUFFS, IN PARTICULAR PASTY SOLID FOODSTUFFS**

WEGWERFBARER PAPIERLÖFFEL FÜR SPEISEEIS UND ÄHNLICHE FESTE NAHRUNGSMITTEL, INSBESONDERE PASTÖSE FESTE NAHRUNGSMITTEL

CUILLÈRE EN PAPIER JETABLE POUR GLACES ET PRODUITS ALIMENTAIRES SOLIDES SIMILAIRES, EN PARTICULIER DES PRODUITS ALIMENTAIRES PÂTEUX

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Description

[0001] The present invention relates to a disposable paper spoon for ice cream and other similar solid foodstuffs, in particular pasty solid foodstuffs.

[0002] The invention refers to the field of disposable tableware as well as, in a particular form of use, to the field of lids for food containers.

[0003] It is known that, following publication of the European Union Directive No. 904/2019 (so-called "SUP" directive - Single Use Plastics) which bans some plastic products, including disposable tableware, greater attention has been developed to recycling by consumers and producers. This led in a short time to a greater demand for solutions, both in the field of food packaging, and more generally in the field of all non-durable consumer goods, generally made of paper or cardboard in order to be more easily recyclable.

[0004] In particular, currently the disposable spoons used to eat artisanal and industrial ice cream are made using a wide range of materials (plastic, bioplastic, wood, etc.), many of which are no longer compatible with regulations of many countries of the European Union. Document KR 2016 0047801 A discloses a disposable spoon in accordance with the preamble of claim 1.

[0005] The ice cream spoon, in the artisanal and industrial ice cream sector, is often found inserted under a paper lid, inside a housing formed between the lower surface of the lid and a paper disc, interference-fitted with the side walls of the lid, at such a height as not to engage the engaging means, generally by interference or by screwing, between the lid and the corresponding container. In this way, the spoon can then be stored and distributed together with the container itself, to be available when the ice cream is eaten.

[0006] The solution just described, currently on the market, therefore provides that a disposable ice cream spoon can be made of materials (such as plastic, bioplastic, wood) that will be banned from the market in a short time, due to the transposition of the EU directive N. 904/2019 by the countries member of the European Union.

[0007] Furthermore, in case the disposable ice cream spoon is inserted under a paper lid, the disposal issue arises. In fact, while the container and the lid can be both disposed of in the paper recycling bins, the spoon (in plastic, bioplastic, wood, etc.) can be disposed of, as appropriate, in the bins for collecting plastics or organic materials, but not in those for paper collection.

[0008] The solution according to the present invention fits in this context, which aims to:

- reduce the use of plastic and bioplastic used for making disposable tableware;
- promote the use of materials from renewable sources and easily recyclable, such as paper;
- reduce the impact that the solutions according to the known art have on transport and storage of the ice

cream spoons, by reducing the weight and bulk of the finished product; and

- reduce the amount of raw material used to make the finished product, in particular when the spoon is coupled to the lid of an ice cream container.

[0009] These and other results are obtained according to the present invention by proposing a disposable paper spoon for ice cream made of paper, or made of a recyclable raw material coming from renewable sources, rather than of plastic.

[0010] In particular, according to the present invention, a paper spoon is proposed, which is put up for sale and distributed as a 2D die-cut, i.e. developed on two dimensions only, which has folding lines on both sides, by whose folding, when in effective use, it is possible to give the spoon the three-dimensionality and rigidity necessary to adapt to the different consistencies of both artisanal and industrial ice cream that can be found on the market.

[0011] The 2D conformation of the spoon according to the invention allows its easy insertion under a paper lid, ensures the maintenance of the engagement position of the spoon under the lid, allowing its easy extraction.

[0012] The aim of the present invention is therefore to provide a disposable spoon, in particular a disposable paper spoon, for ice cream and other similar solid foodstuffs, in particular pasty solid foodstuffs, which allows to overcome the limits of the spoons according to the known art and to obtain the technical results previously described.

[0013] A further aim of the invention is that said spoon can be made with substantially low costs, both in terms of production costs and in terms of management costs.

[0014] Last but not the least aim of the invention is to propose a spoon that can be coupled with a lid for an ice cream container, both the spoon and the lid being made of paper, which are easy to make, as well as safe and reliable to use.

[0015] Therefore, the specific object of the present invention is a disposable spoon, having the characteristics defined in the attached claim 1.

[0016] Further characteristics of the disposable spoon according to the present invention are defined in the respective dependent claims.

[0017] The effectiveness of the disposable spoon of the present invention is clear, in particular a disposable paper spoon, for ice cream and other similar solid foodstuffs, in particular pasty solid foodstuffs, which allows to reduce the amount of plastic and bioplastic used for its realization.

[0018] In particular, the spoon according to the present invention is made using a cardboard coupled on both sides with a plastic film, in order to guarantee the use in the food sector and the impermeability of the spoon, both characteristics necessary for the purpose for which the spoon is intended to. The percentage of plastic, whose presence is limited to just the film coupled to the cardboard, is drastically reduced to below 10% by weight,

making plastic no longer the predominant raw material in the finished product.

[0019] Furthermore, the spoon according to the present invention allows to reduce the impact that the solutions according to the known art have on transport and storage of the spoons for ice cream, by reducing the weight and bulk of the finished product. In fact, the spoon is sold and distributed in its 2D die-cut configuration, which helps to optimize the packaging compared to traditional spoons which, being made of plastic, do not allow, due to the nature of the material and the production methods, a modification of their shape after their production. On the contrary, the 2D die-cut conformation of the spoon according to the present invention helps to reduce the volume of the finished product to be distributed and, with the same packaging, compared to a traditional plastic spoon, allows to reduce the dimensions of the packaging for transport, i.e. to increase the number of pieces inside the same packaging used to transport the plastic spoon, with consequent environmental advantages related to transport and to CO₂ emissions and other pollutants connected thereto.

[0020] Furthermore, especially being able to be applied to the inner side of a container lid, in particular an ice cream cup, the disposable spoon according to the present invention allows to reduce the raw material used to make the finished product. In fact, the particular shape of the spoon and its 2D configuration allow it to be easily inserted under the paper lid, often used in the artisanal and industrial ice cream sector, for the ice cream takeaway. Compared to the configuration of the lid and spoon assembly currently used and marketed, the invention has the advantage of reducing the overall components forming the product and therefore of achieving a decrease in the raw material used. In fact, we pass from the known art, consisting of the lid and spoon assembly (in plastic, bioplastic, wood, etc.) with the addition of a paper disc to define the housing for the spoon itself, to the solution according to the present invention, by virtue of which the paper spoon is able to autonomously maintain the engagement position with the internal side of the lid, with the capability of eliminating the holding disk, as it is superfluous. The reduction of the components forming the product involves, in the end-of-life phase of the product, a decrease in the waste introduced into the recycling plants.

[0021] Finally, the disposable paper spoon for ice cream and other similar solid foodstuffs according to the present invention has the advantage of the homogeneity of the materials to be disposed of. In fact, the application of the paper spoon in the paper lid, according to the invention, allows to offer a lid made entirely of paper, so as to facilitate its disposal by the final user. The paper spoon is inserted under the lid, replacing the spoon which, according to the known art, is currently made of plastic, bioplastic or wood, thus obtaining a finished product (consisting of the lid and the spoon assembly) entirely in paper.

[0022] The present invention will now be described, for illustrative but not limitative purposes, according to a preferred embodiment thereof, with particular reference to the figures of the attached drawings, in which:

- Figure 1 shows a view of a disposable spoon according to the present invention,
- Figure 2 shows a view of the spoon of Figure 1, coupled to a lid, and
- Figures 3a - 3c show the steps of extracting a spoon according to the invention from the engagement position with a lid and the subsequent folding of the flaps of the spoon in order to take the form of use.

[0023] With reference to the figures, a disposable spoon 1 according to the present invention consists of a die-cut 10 which develops in two dimensions, is inscribable in a circumference, of variable diameter when required, coinciding in Figure 2 with the internal diameter of the lid 20, and is symmetrical with respect to an axis of symmetry a. It is also possible to divide the die-cut 10 into two portions, an upper portion 11 and a lower portion 12, delimited by the straight line r. In the upper portion 11 there are two flaps 13, connected to each other by a connection 14. Two folding lines 15 originate from the center of the connection 14 just described, extending symmetrically with respect to the axis a, beyond half of the die-cut, to reach the edge of the die-cut at the intersection with the straight line r.

[0024] In order to give the die-cut 10 the characteristic of being able to give shape to a spoon 1 suitable for use, i.e. with sufficient rigidity to adapt to the different consistencies of both artisanal and industrial ice cream that can be found on the market, the design parameters considered important are: the proportionality ratio (α), the grammage of the support and the shape of the spoon 1.

[0025] In particular, x being defined the total length between the upper and lower ends of the die-cut 10, y the length of the upper portion 11 and z the length of the lower portion 12, the proportionality ratio (α) is defined as the ratio between the length y and the length x, that is:

$$\alpha = y/x$$

[0026] For the purposes of the present invention, the proportionality ratio (α) is preferably greater than 0.5, so as to guarantee a proportion between the length of the lower portion 12 and the total length of the die-cut 10, such as to guarantee the correct dimensions of the spoon 1, to ensure that it does not fold when using it. This allows the spoon 1 to adapt to the different consistencies of both artisanal and industrial ice cream that can be found on the market.

[0027] A further important design parameter is the correct measuring of the grammage of the support used, i.e. of the paper used for making the die-cut 10, as even a suitable choice of this parameter allows the spoon 1 to

be provided with the necessary rigidity to allow it to be used correctly, adapting to the consistencies of the foods for which it will be used. In this regard, the optimal range varies from 200 to 450 g/m².

[0028] A further design aspect concerns the shape of the die-cut 10. As shown in Figure 2, the shape of the die-cut 10 is such that it can always be inscribed in a circumference passing through the three tangent points shown in the figure, respectively two tangent points 16, each at the end of one of the two flaps 13 of the upper portion 11 and a tangent point 17, at the end of the lower portion 12.

[0029] This last characteristic allows to insert the die-cut 10 under a circular lid 20. The shape just described also allows the die-cut 10 to remain in an engaged position with the lid 20, without the need for a paper disc performing this hold function, the die-cut 10 being interference-fitted with the side walls of the lid 20, to a height such as not to engage the engagement means between the lid and the corresponding container.

[0030] Finally, referring to Figures 3a - 3c, the steps of extracting a spoon 1 according to the invention are shown from the engagement position with a lid 20 and the subsequent folding of the flaps 13 of the spoon 1 to take the form of use. In particular, through the connection 14, characterizing the shape of the spoon 1, an opening is created that the user can use to insert a finger and easily extract the spoon 1 from the lid 20. Once extracted, by folding the two flaps 13 upwards or towards the bottom of the die-cut 10, up to the folding lines 15, the handle of the spoon 1 is obtained which will allow the use thereof. The function of collecting ice cream or other foodstuffs, in particular pasty solid foodstuffs, is delegated to the lower portion 12 of the spoon 1.

[0031] The present invention has been described for illustrative, but not limitative purposes, according to its preferred embodiments, but it is to be understood that variations and/or modifications may be made by those skilled in the art without thereby departing from the its scope of protection, as defined by the attached claims.

Claims

1. Disposable spoon (1), in particular for ice cream and other similar solid foodstuffs, constituted by a die-cut (10), comprising an upper portion (11) and a lower portion (12), delimited by a straight line (r), two folding lines (15) being made on said upper portion (11), forming a cusp in correspondence with the upper edge of said die-cut (10) and each terminating in correspondence with a respective point where said straight line (r) intersects the edge of said die-cut (10), said folding lines defining two flaps (13) of said upper portion (11),
characterized in that the shape of said die-cut (10) is inscribable in a circumference, with at least three points of tangency, respectively two tangent points

(16), each at the end of one of the two flaps (13) of the upper portion (11) and a tangent point (17), at the end of the lower portion (12).

2. Disposable spoon (1) according to claim 1, **characterised in that**, x being defined the total length between the upper and lower ends of the die-cut (10) and y the length of the upper portion (11), the proportionality ratio (α), equal to

$$\alpha = y/x$$

is greater than 0.5.

3. Disposable spoon (1) according to claim 1 or 2, **characterised in that** said die-cut (10) is symmetrical with respect to an axis (a) perpendicular to said straight line (r).
4. Disposable spoon (1) according to any one of the preceding claims, **characterised in that** said die-cut (10) is made of paper for food use or of cardboard covered with a film of plastic material.
5. Disposable spoon (1) according to claim 4, **characterised in that** said paper has a grammage between 200 and 450 g/m².
6. Disposable spoon (1) according to claim 4 or 5, **characterised in that** the quantity by weight of said plastic film is equal to or less than 10% of the total weight of said die-cut (10).
7. Disposable spoon (1) according to any one of the preceding claims, **characterised in that** said die-cut (10) is interference-fitted with the side walls of said lid (20), in correspondence with said tangent points (16, 17).
8. Disposable spoon (1) according to any one of the preceding claims, **characterised in that** said die-cut (10) comprises a connection (14) between said flaps (13), of concave shape.

Patentansprüche

1. Einweglöffel (1), insbesondere für Speiseeis und andere ähnliche feste Nahrungsmittel, bestehend aus einem Stanzteil (10), das einen oberen Abschnitt (11) und einen unteren Abschnitt (12) umfasst, die durch eine gerade Linie (r) begrenzt sind, wobei zwei Faltlinien (15) auf dem oberen Abschnitt (11) ausgebildet sind, die einen Höcker in Übereinstimmung mit der oberen Kante des Stanzteils (10) bilden und jeweils in Übereinstimmung mit einem entsprechenden Punkt enden, an dem die gerade Linie (r) die

Kante des Stanzteils (10) schneidet, wobei die Faltlinien zwei Klappen (13) des oberen Abschnitts (11) definieren, **dadurch gekennzeichnet, dass** die Form des Stanzteils (10) in einen Umfang mit mindestens drei Berührungspunkten einbeschreibbar ist, und zwar zwei Berührungspunkte (16) jeweils am Ende einer der beiden Klappen (13) des oberen Abschnitts (11) und ein Berührungspunkt (17) am Ende des unteren Abschnitts (12).

2. Einweglöffel (1) nach Anspruch 1, **dadurch gekennzeichnet, dass**, wobei x die Gesamtlänge zwischen dem oberen und dem unteren Ende der Stanzung (10) und y die Länge des oberen Teils (11) ist, das Proportionalitätsverhältnis (α), gleich

$$\alpha = y/x$$

größer als 0,5 ist.

3. Einweglöffel (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Stanzung (10) symmetrisch in Bezug auf eine Achse (a) ist, die senkrecht zu der Geraden (r) verläuft.
4. Einweglöffel (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Stanzung (10) aus Papier für Lebensmittel oder aus mit einer Kunststoffolie überzogenem Karton hergestellt ist.
5. Einweglöffel (1) nach Anspruch 4, **dadurch gekennzeichnet, dass** das Papier eine Grammatur zwischen 200 und 450 g/m² aufweist.
6. Einweglöffel (1) nach Anspruch 4 oder 5, **dadurch gekennzeichnet, dass** die Gewichtsmenge der Kunststoffolie gleich oder weniger als 10% des Gesamtgewichts des Stanzteils (10) beträgt.
7. Einweglöffel (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Stanzung (10) mit den Seitenwänden des Deckels (20) in Übereinstimmung mit den Tangentenpunkten (16, 17) ineinandergreift.
8. Einweglöffel (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** die Stanzung (10) eine Verbindung (14) zwischen den Laschen (13) mit konkaver Form aufweist.

Revendications

1. Cuillère jetable (1), notamment pour glaces et autres aliments solides similaires, constituée d'une découpe (10), comprenant une partie supérieure (11) et

une partie inférieure (12), délimitée par une ligne droite (r), deux lignes de pliage (15) étant réalisées sur ladite partie supérieure (11), formant une cuspidé en correspondance avec le bord supérieur de ladite découpe (10) et se terminant chacune en correspondance avec un point respectif d'intersection de ladite ligne droite (r) avec le bord de ladite découpe (10), lesdites lignes de pliage définissant deux rabats (13) de ladite partie supérieure (11), **caractérisée en ce que** la forme de ladite découpe (10) est inscriptible dans une circonférence, avec au moins trois points de tangence, respectivement deux points tangents (16), chacun à l'extrémité d'un des deux rabats (13) de la partie supérieure (11) et un point tangent (17), à l'extrémité de la partie inférieure (12).

2. Cuillère jetable (1) selon la revendication 1, **caractérisée en ce que**, x étant défini la longueur totale entre les extrémités supérieure et inférieure de l'emporte-pièce (10) et y la longueur de la partie supérieure (11), le rapport de proportionnalité (α), égal à

$$\alpha = y/x$$

est supérieur à 0,5.

3. Cuillère jetable (1) selon la revendication 1 ou 2, **caractérisée en ce que** ladite découpe (10) est symétrique par rapport à un axe (a) perpendiculaire à la droite (r).
4. Cuillère jetable (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ladite découpe (10) est réalisée en papier à usage alimentaire ou en carton recouvert d'un film en matière plastique.
5. Cuillère jetable (1) selon la revendication 4, **caractérisée par le fait que** ledit papier a un grammage compris entre 200 et 450 g/m².
6. Cuillère jetable (1) selon la revendication 4 ou 5, **caractérisée par le fait que** la quantité en poids dudit film plastique est égale ou inférieure à 10% du poids total de ladite découpe (10).
7. Cuillère jetable (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ladite découpe (10) est ajustée en interférence avec les parois latérales dudit couvercle (20), en correspondance avec lesdits points tangents (16, 17).
8. Cuillère jetable (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ladite découpe (10) comporte une liaison (14) entre lesdits rabats (13), de forme concave.

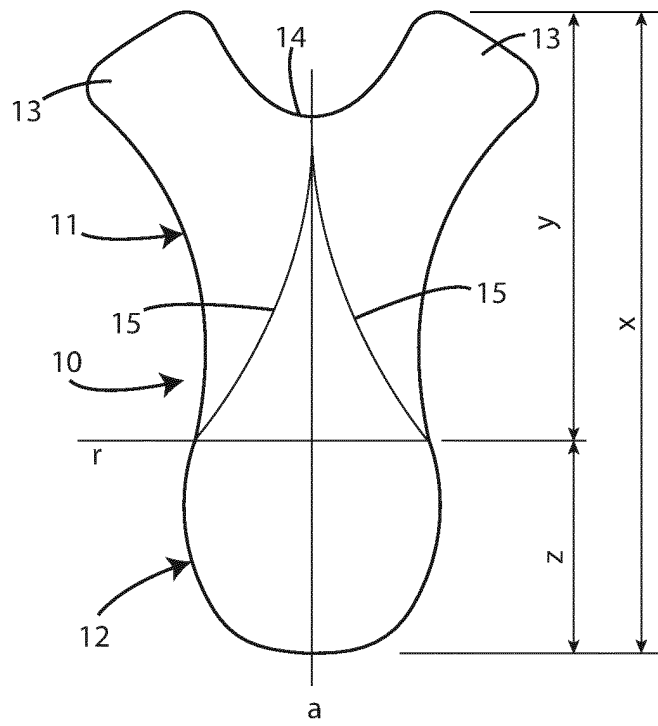


Fig. 1

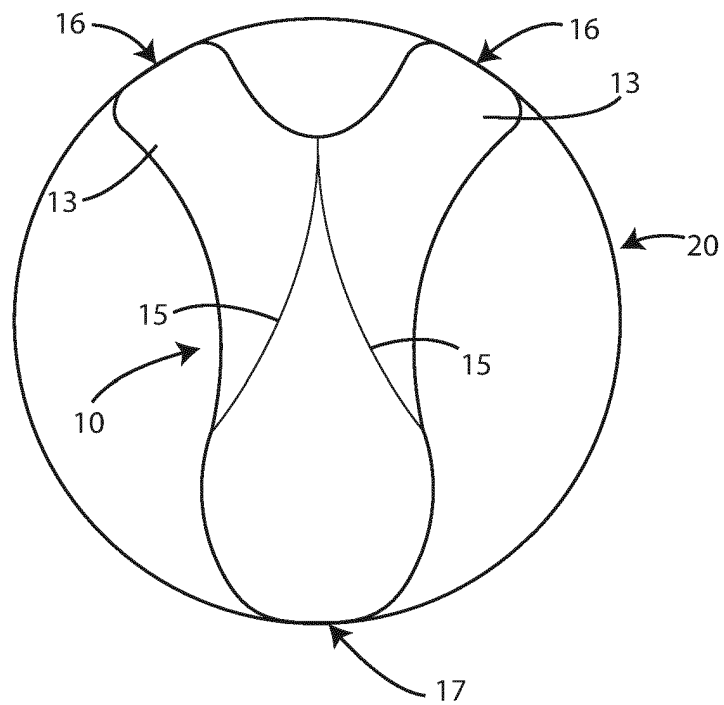


Fig. 2

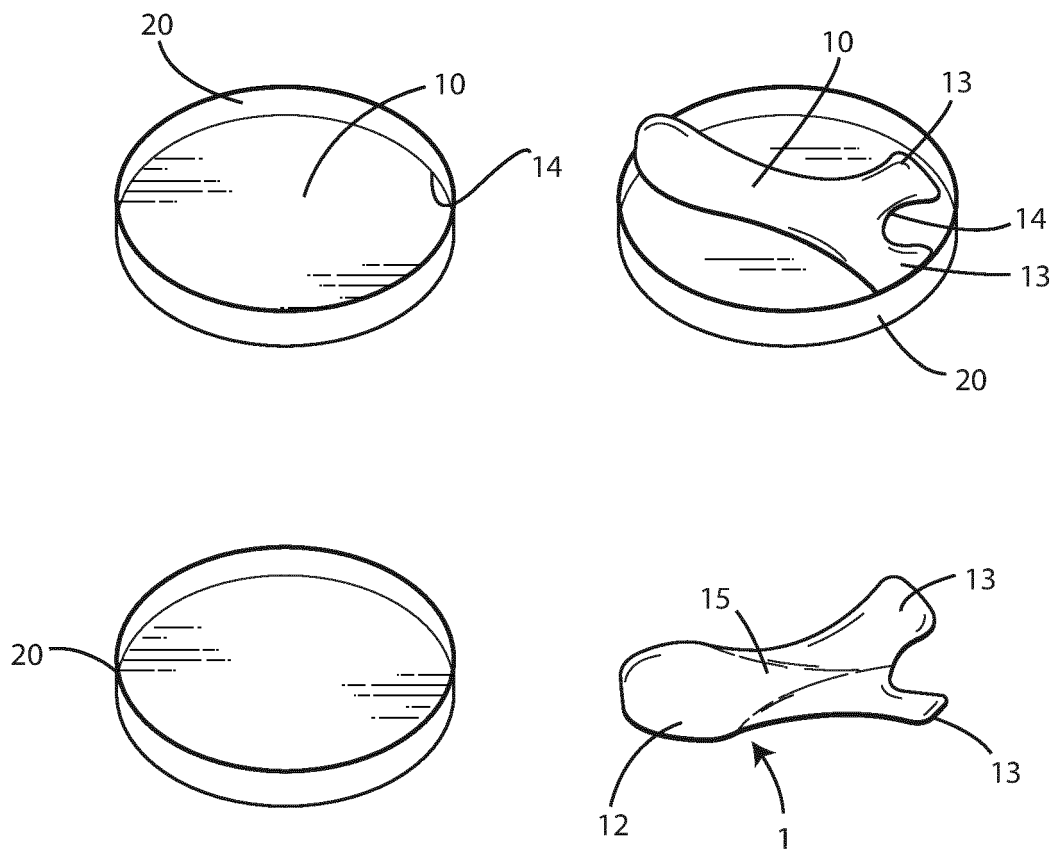


Fig. 3

REFERENCES CITED IN THE DESCRIPTION

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