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(54) **DRINKING STRAW**

TRINKSTROHHALM

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Description

TECHNICAL FIELD

[0001] The present invention relates to a drinking straw for imbibing a drink, the drinking straw having a substantially circular cross section.

BACKGROUND ART

[0002] The use of drinking straws for imbibing a drink has long been common practice. From the simple, original natural straw, the drinking straw has been developed into flexible or telescopic constructions which nowadays to a large extent accompany single-use disposal packages for drinks. The drinking straw which, for hygienic reasons, is often packed in a protective envelope of thin plastic, is applied on the outside of the packaging container and is intended for the consumption of the contents of the package, such as juices, sports drinks and the like.

[0003] Today's drinking straws are most generally manufactured from flexible, but relatively rigid plastic material and, as a result, can also be used for opening the packaging container. That section of the drinking straw which is intended to be immersed in the drink often has a bevelled end which facilitates penetration of a thinner portion of the wall of the packaging container.

[0004] In order to make the drinking straw of sufficient length for convenient access to the contents of the packaging container, the drinking straw is most generally provided with a flexible, bellows-like central section. Alternatively, the drinking straw may consist of two parts which are telescopically insertable in one another. In order to have space on a packaging container, for example a packaging container of parallelepipedic shape, the flexible drinking straw must be folded double, or alternatively the parts of the telescopic drinking straw must be slid into one another.

[0005] When the drinking straw has been positioned in the packaging container by having penetrated the wall of the packaging container, the result will be a conventional drinking straw which has direct access to the drink enclosed in the packaging container. This may occasion problems if the packaging container were accidentally to be toppled over or if the packaging container is compressed in a heavy-handed manner. This latter is something that happens quite often when children handle the packaging container.

[0006] An example of an initially sealed drinking straw is known from US-A-5.201.460.

OBJECTS OF THE PRESENT INVENTION

[0007] One object of the present invention is to realise a drinking straw which reduces or prevents product spillage but at the same time permits a normal utilisation of the drinking straw for imbibing a drink.

[0008] A further object of the present invention is that

the drinking straw may be formed so as to control the flow of contents into the mouth of the person drinking from the packaging container.

[0009] Yet a further object of the present invention is that the drinking straw, as a result of its design, may be employed for adding flavouring substances via the drinking straw.

[0010] Still a further object of the present invention is that the drinking straw may be designed in different ways which may be utilised in different marketing campaigns.

SOLUTION

[0011] These and other objects have been attained according to the present invention in that the drinking straw of the type described by way of introduction has been given the characterising features that both ends of the drinking straw display seals and that one or more flaps are cut into both ends of the drinking straw in the immediate proximity of the seals.

[0012] Preferred embodiments of the present invention have further been given the characterising features as set forth in the appended subclaims.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

[0013] One preferred embodiment of the present invention will now be described in greater detail hereinbelow, with reference to the accompanying Drawings. In the accompanying Drawings:

Fig. 1 shows a first embodiment of the present invention;

Fig. 2 shows a second embodiment of the present invention; and

Fig. 3 shows a third embodiment of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0014] Figs. 1-3 show three different embodiments of the present invention but all have the same basic concept. All embodiments show a drinking straw 1 which has two straight sections 2, 3 of which the one section 2 is longer than the other section 3. Alternatively, both of the sections 2, 3 may be of the same length. Between the two straight sections 2, 3, there is disposed a bellows-shaped section 4 which permits the drinking straw 1 to be folded as shown in the figures. When the drinking straw 1 is used for imbibing a drink, the bellows-shaped section 4 is folded back so that the drinking straw 1 will be more or less straight. The design of the drinking straw 1 according to the present invention may also be employed for completely straight drinking straws 1 as well as for telescopic drinking straws 1 or for foldable straws 1 with more than one bellow-shaped portion 4.

[0015] The drinking straws 1 in Figs. 1-3 display a sub-

stantially circular cross section. The drinking straws are manufactured from a plastic material which has been approved for use together with foods and which is capable of being sealed by means of heat.

[0016] The drinking straws 1 further display two ends 5, 6, where that end 5 which is disposed on the longer straight section 2 is intended to penetrate a weakened portion of a wall of a packaging container. The other end 6 on the shorter straight section 3 is intended to be placed in the mouth of the person intending to imbibe the drink which is enclosed in the packaging container.

[0017] Both ends 5, 6 of the drinking straw 1 are completely sealed by means of seals 7, 8 which have been realised in that the ends 5, 6 of the circular drinking straw 1 have been compressed together and sealed by heating. The seals 7, 8 may be cut and given different various forms depending upon their final use, so that the seal 7 on the longer straight section 2 which is to be used for penetrating the wall of a packaging container has been given a spiculated or tipped appearance. The seal 8 on the shorter straight section 3 has been given a more rounded appearance since this is intended to be placed in the mouth of the person drinking from the packaging container.

[0018] In immediate proximity to the two seals 7, 8 on both ends 5 and 6, respectively, of the drinking straw 1, the wall of the drinking straw 1 has been provided with notches 9 which create and define flaps 10 in the wall of the drinking straw.

[0019] In the first preferred embodiment of the present invention, as illustrated in Fig. 1, the drinking straw 1 has one or more notches 9 of cruciform appearance, which gives rise to a number of triangular flaps 10. Fig. 2 shows the second preferred embodiment where one or more notches 9 are of semicircular appearance and where one or more flaps 10 thus display a semicircular appearance. The third preferred embodiment is illustrated in Fig. 3. Here, one or more notches 9 have been designed so that two parallel notches 11 have a rounded short end 12 and where one or more flaps 10 will have a corresponding appearance.

[0020] The notches 9 may naturally be formed in a plurality of different ways. The notches 9 may, for example, be given figurative appearance which can be utilised in marketing, such as specific figures or logotypes. However, the notches 9 must be formed so that they give rise to flaps 10 in the wall of the drinking straw 1. The notches 9 and thereby the flaps 10 may also be differently formed in each different end 5, 6 of the drinking straw 1.

[0021] As a result of the design of the drinking straw 1 according to the present invention, the drinking straw is in principle completely closed before use. The drinking straw 1 is in principle still closed when inserted into a packaging container. Trials have shown that an incautious handling of the packaging container, so that this is lightly compressed together or so that the packaging container topples over, does not give rise to any leakage of the contents of the packaging container, or at least a

minimum of leakage.

[0022] When the drinking straw 1 is used for imbibing a drink, suction force is applied at one end 6 of the drinking straw 1 which is sufficient to open the flaps 10 in both ends 5, 6 of the drinking straw 1. Trials have demonstrated that an opening of the flaps 10 by 30% is experienced in the same manner as if use were made instead of a drinking straw 1 with completely open ends 5, 6. Since the drinking straw 1 is manufactured from a plastic material which is flexible, the flaps 10 return to the closed position when there is no longer any suction force applied, i.e. when no one drinks from the packaging container. By varying the material in the packaging container so that it is more or less flexible and, at the same time, adapting the appearance of the notches 9 and the flaps 10, a varied and predetermined flow may be obtained when a person imbibes the drink in the container.

[0023] A drinking straw 1 formed in accordance with the principles of the present invention may also be employed for adding flavouring substances, in the form of small balls, inside the drinking straw 1, since the drinking straw 1 is in principle closed before being used. Only when the flaps 10 open and the drink enters into the drinking straw 1 will the flavouring substances come into contact with the drink. Other desirable additives may also be applied in the same manner.

[0024] As will have been apparent from the above description, the present invention realises a drinking straw for imbibing a drink, the drinking straw being formed such that, when it penetrates the wall of a packaging container, there is no immediate access to the product enclosed in the packaging container. Only when a suction force is applied to one end of the drinking straw will the product flow through the drinking straw. The design of the drinking straw reduces or prevents leakage in the event of incautious handling of a packaging container with a drinking straw which is inserted in the packaging container, or if the packaging container with the drinking straw is toppled over. The design of the drinking straw also affords the possibility of adding flavouring substances or the like inside the drinking straw.

Claims

1. A drinking straw (1) for imbibing a drink, the drinking straw (1) having substantially circular cross section, **characterised in that** both ends (5, 6) of the drinking straw (1) display seals (7, 8), and that one or more flaps (10) are cut out in both ends (5, 6) of the drinking straw (1) and in immediate proximity of the seals (7, 8).
2. The drinking straw (1) as claimed in Claim 1, **characterised in that** the flaps (10) are closed until such time as a suction force is applied in one end (6) of the drinking straw (1); and that the flaps (10) are disposed to return to the closed position once the

suction force is removed.

3. The drinking straw (1) as claimed in Claim 1, **characterised in that** the seal (7) in one end (5) of the drinking straw (1) is designed so as to penetrate a wall in a packaging container; and that the seal (8) in the other end (6) of the drinking straw (1) is designed to be placed in the mouth.
4. The drinking straw (1) as claimed in Claim 1, **characterised in that** the flaps (10) display a triangular appearance.
5. The drinking straw (1) as claimed in Claim 1, **characterised in that** the flaps (10) display a semicircular appearance.
6. The drinking straw (1) as claimed in Claim 1, **characterised in that** the drinking straw (1) has two straight sections (2, 3) and an interjacent, bellows-shaped section (4).
7. The drinking straw (1) as claimed in Claim 1, **characterised in that** the drinking straw (1) is telescopic.
8. The drinking straw (1) as claimed in Claim 1, **characterised in that** the drinking straw (1) is straight.

Patentansprüche

1. Trinkhalm (1) zum Ansaugen eines Getränks, wobei der Trinkhalm (1) einen im Wesentlichen kreisförmigen Querschnitt aufweist, **dadurch gekennzeichnet, dass** beide Enden (5, 6) des Trinkhalms (1) Versiegelungen (7, 8) aufweisen und dass eine oder mehrere Klappen (10) in beiden Enden (5, 6) des Trinkhalms (1) und in unmittelbarer Nähe der Versiegelungen (7, 8) ausgeschnitten sind.
2. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Klappen (10) so lange geschlossen sind, bis eine Saugkraft an ein Ende (6) des Trinkhalms (1) angelegt wird, und dass die Klappen (10) dazu angeordnet sind, nach Entfernen der Saugkraft in die geschlossene Stellung zurückzukehren.
3. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Versiegelung (7) in einem Ende (5) des Trinkhalms (1) dazu ausgeführt ist, eine Wand in einem Verpackungsbehälter zu durchdringen, und dass die Versiegelung (8) in dem anderen Ende (6) des Trinkhalms (1) dazu ausgeführt ist, in den Mund positioniert zu werden.
4. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Klappen (10) ein dreieckiges Er-

scheinungsbild aufweisen.

5. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Klappen (10) ein halbkreisförmiges Erscheinungsbild aufweisen.
6. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Trinkhalm (1) zwei gerade Abschnitte (2, 3) und einen dazwischenliegenden balgförmigen Abschnitt (4) aufweist.
7. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Trinkhalm (1) zusammenschiebbar ist.
8. Trinkhalm (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Trinkhalm (1) gerade ist.

Revendications

1. Paille pour boisson (1) pour consommer une boisson, la paille pour boisson (1) ayant une section transversale substantiellement circulaire, **caractérisée en ce que** les deux extrémités (5, 6) de la paille pour boisson (1) présentent des joints (7, 8) et **en ce qu'un ou plusieurs volets (10) sont découpés** dans les deux extrémités (5, 6) de la paille pour boisson (1) et à proximité immédiate des joints (7, 8).
2. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** les volets (10) sont fermés jusqu'à ce qu'une force de succion soit appliquée dans une extrémité (6) de la paille pour boisson (1), et **en ce que** les volets (10) sont disposés de manière à revenir dans la position fermée une fois que la force de succion est supprimée.
3. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** le joint (7) dans une extrémité (5) de la paille pour boisson (1) est conçu de manière à pénétrer à travers une paroi dans un contenant d'emballage ; et **en ce que** le joint (8) dans l'autre extrémité (6) de la paille pour boisson (1) est conçu pour être placé dans la bouche.
4. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** les volets (10) présentent une apparence triangulaire.
5. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** les volets (10) présentent une apparence semi-circulaire.
6. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** la paille pour boisson (1) a deux sections droites (2, 3) et une section intermédiaire (4) en forme de soufflet.

7. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** la paille pour boisson (1) est télescopique.

8. Paille pour boisson (1) selon la revendication 1, **caractérisée en ce que** la paille pour boisson (1) est droite.

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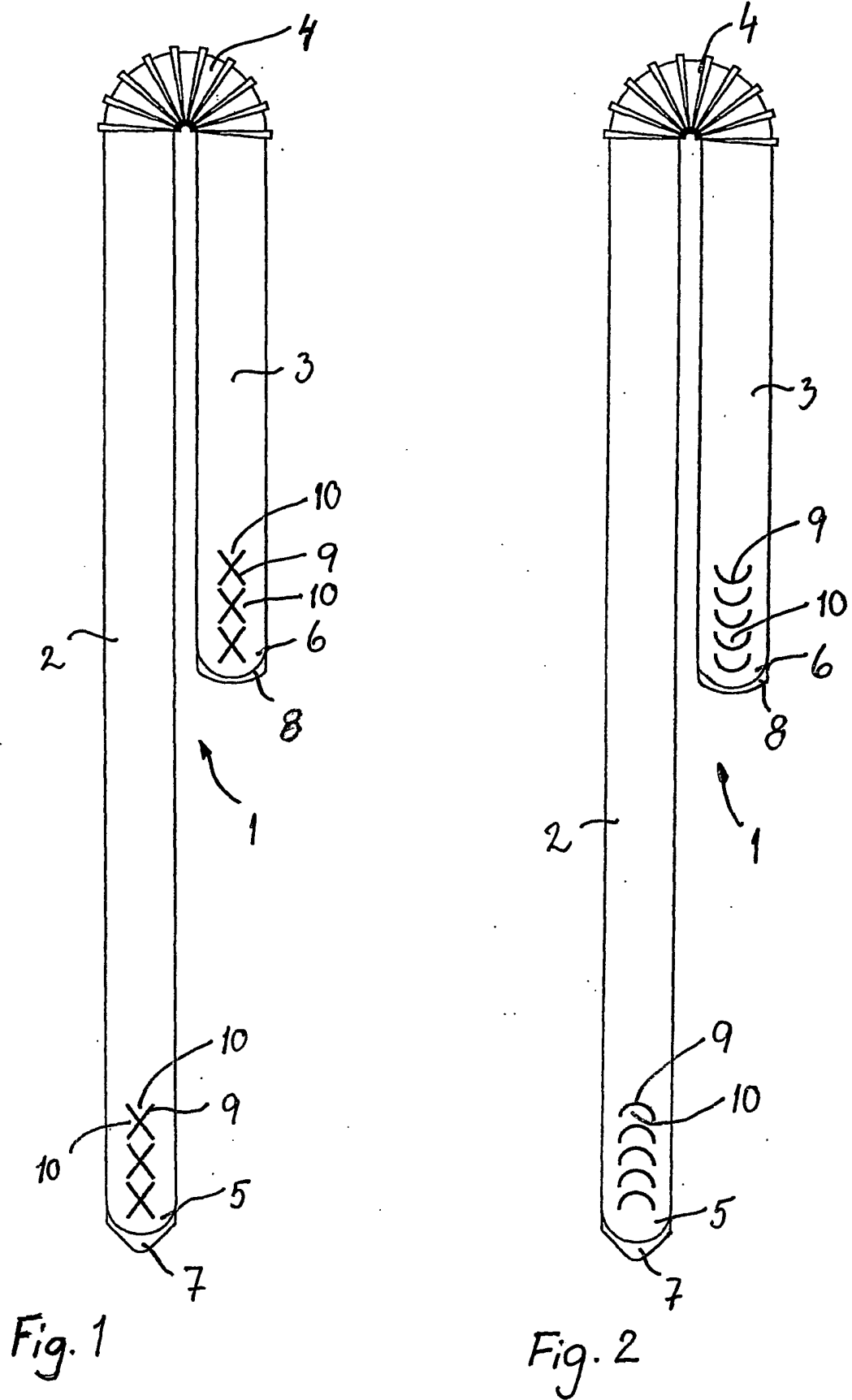
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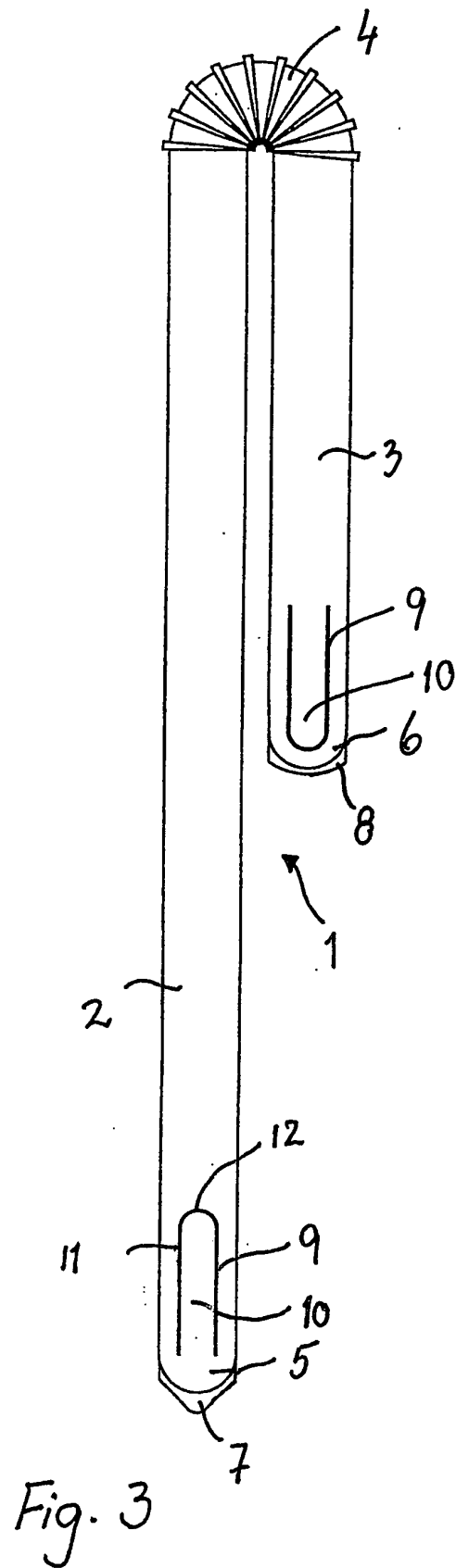
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REFERENCES CITED IN THE DESCRIPTION

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