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(54) DOUBLE-BODY CONTAINER

(57) The present application describes a double-body container for cooling beverages and/or for prolonged preservation of beverages at a low temperature, comprising an inner body (1) and an outer body (2) integrally made of metallic material, for example aluminum, wherein both have a flap surrounding their mouths, the flap of the inner body (3) juxtaposing the flap of the outer body (4) - the latter acting as a stop of the former, the two forming, by means of a connection process, a rim which perfectly fixates the two bodies.

The container further comprises a chamber (8) between those two bodies, inaccessible and perfectly sealed, with an available volume circumscribed by the outer wall of the inner body (9) and by the inner wall of the outer body (10) and wherein said volume is filled, although not completely, by a sponge (11) impregnated with a fluid.

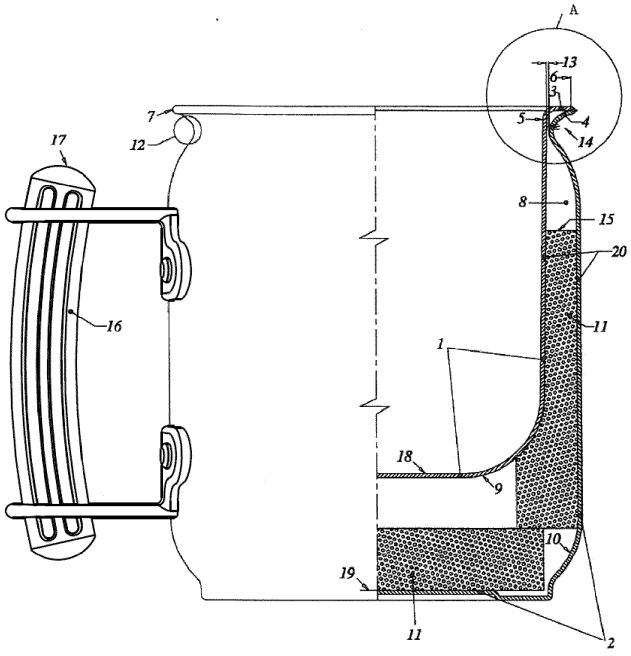

Fig. 1

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Description

Technical domain

[0001] The present application discloses a double-body container.

Background

[0002] Many devices and objects designed for cooling beverages are known in the state of the art, yet none of them meets the set of objectives which have been achieved with the product herein presented and which aim at solving state of the art problems that these solutions do not solve.

[0003] Indeed, containers are known which are designed for the same effect resulting from the coupling of an inner metal body with an outer body in polymeric material, an annular engagement between said two bodies being provided in the upper part of said container, wherein the chamber is filled with a coolant and the bottom of the container is, thereafter, secured to the outer body by crimping, the inner body being thus supported on wedges provided at the bottom. From a technical point of view, the assemblage of pieces from different materials and the existence of an anti-leakage joint which, with continued use or by reason of collision or fall of the container may deteriorate, represent disadvantages when compared to the herein disclosed container whose double body is integrally made from metal and has no joint or wedges.

[0004] In addition, multi-piece engagement and adjustment systems are also known, comprising an elastic ring which fits into the annular mouth of the container, which annular mouth in turn engages into the inner and outer walls of the container, with the same drawbacks as outlined above. It should also be noted that the container model described above has a hole in the bottom through which the coolant is poured into the chamber, which hole is then closed with a lid.

[0005] The inclusion of a lid in the coolant inlet hole is common in said models and in various other models, but not in that herein disclosed. This technical feature is disadvantageous because any deficient sealing of this hole, or degradation of said sealing upon ageing and through its permanent subjection to great temperature variations, causes the lid to fail to fulfill its objectives.

[0006] It is thus apparent from the foregoing that known beverage cooling containers present certain problems, only overcome with the container herein disclosed, which presents a set of unique technical features.

Summary

[0007] The present application describes a double-body container for cooling and/or for preservation of beverages at a low temperature, characterized in that the inner body (1) and the outer body (2) are integrally made of metal, and both have a flap surrounding the mouth thereof, respectively (5) and (6), the flap of the inner body (3) juxtaposes the flap of the outer body (4), the latter acting as a stop of the other, the two forming, by means of crimping, a rim (7) which perfectly fixates the two bodies, in that a chamber (8) is provided between those two bodies, inaccessible and perfectly sealed, in that the volume available in said chamber is all that which is circumscribed by the outer wall of the inner body (9) and by the inner wall of the outer body (10) and in that said chamber is filled, although not completely, by a sponge impregnated with fluid (11).

[0008] In a particular embodiment of the double-body container, the outer body (2) has, directly below the mouth (6) and around the same, a continuous or discontinuous bottleneck (12), wherein the outer wall of the inner body (9) and the inner wall of the outer body (10) must be perfectly juxtaposed, or with a small clearance (13) in the bottleneck area or areas.

[0009] In a particular embodiment of the double-body container, the sponge impregnated with fluid (11) contained in the chamber (8) does not reach the bottleneck area (12).

[0010] In a particular embodiment of the double-body container, the sponge impregnated with fluid (11) is 1 to 2 cm below the bottleneck area (12).

[0011] In a particular embodiment of the double-body container, the space in the chamber (8) between the upper edge of the sponge (15) and the bottleneck area is filled with rubber.

[0012] In a particular embodiment of the double-body container, the handle (16) has a slight concavity (17) in the upper part.

[0013] In a particular embodiment of the double-body container, the bottleneck area (12) and the flap of the outer body (4) define a nozzle-shaped curvature (14).

[0014] In a particular embodiment of the double-body container, the chamber (8) contains two pieces of sponge impregnated with fluid (11), one positioned all the way around the side walls (20) of the two bodies, compressed by said walls and extending to the bottom of the container, and the other leaning against the bottom of the chamber (8) and being trapped thereby.

[0015] In a particular embodiment of the double-body container, the bottom of the inner body (18) and the bottom of the outer body (19) are spaced apart about 1/4 of the height of the container.

[0016] In a particular embodiment of the double-body container, the inner body (1), the outer body (2) and the handle (16) of the container are integrally made of aluminum.

[0017] In a particular embodiment of the double-body container, the handle (16) is made of bakelite.

General Description

[0018] The technical problem to be solved by the technology herein presented can be seen as the conception

of a container which can be designated as a mug or a glass and therefore suitable for drinking a beverage, which is meant to cool or to preserve said beverage, for a prolonged period, at a low temperature, around 0°, while it remains in that container, and which at the same time effectively addresses other requirements such as simplicity of manufacture and use, and durability.

[0019] The present application thus describes a double-body container for cooling beverages and/or for prolonged preservation of beverages at a low temperature, comprising an inner body and an outer body integrally made of metallic material, for example aluminum, wherein both have a flap surrounding their mouths, the flap of the inner body juxtaposing the flap of the outer body - the latter acting as a stop of the former, the two forming, by means of a connection process, a rim which perfectly fixates the two bodies. The container further comprises a chamber between those two bodies, inaccessible and perfectly sealed, with an available volume circumscribed by the outer wall of the inner body and the inner wall of the outer body and wherein said volume is filled, although not completely, by a sponge impregnated with a fluid, the composition of which comprises water, monopropylene glycol, sodium silicate and triethanolamine.

[0020] On the other hand, the outer body has, directly below the mouth and around the same, a continuous or discontinuous bottleneck area, wherein the outer wall of the inner body and the inner wall of the outer body must be perfectly juxtaposed - except for small clearance - in the bottleneck area or areas. It should be noted that preferably each of said bottleneck areas matches the flap of the outer body so as to produce a nozzle-shaped curvature. Thus, the lips touch the container only in the area of its rim, this area and the handle being the least cold parts of the container, as appropriate.

[0021] The fact that the flaps that the inner and outer bodies are equipped with are juxtaposed, one acting as the stop of the other - and that the outer wall of the inner body juxtaposes, or almost, the inner wall of the outer body in the bottleneck area, allows an easy and fast positioning of one body in relation to the other, greatly simplifying the production of the model.

[0022] Provision is made for the possibility of the container to be equipped with a handle with a slight concavity in the upper part for supporting the thumb, which offers comfort and ease of handling thereof. The handle may be made of metallic material or polyoxybenzylmethylenglycolanhydride, commonly known as bakelite.

[0023] As is apparent from the foregoing, the developed product is substantially simpler to manufacture than prior art products and can be produced using standard materials, therefore being possible to produce it at a low cost, this beneficial aspect being complemented by a number of technical advantages, such as those deriving from being unbreakable, from having a perfectly sealed chamber with great ability to cool beverages and from not being equipped with any fittings and/or threads.

Brief Description of the Figures

[0024] For an easier understanding of the present application drawings are herein attached, which represent preferred embodiments which, however, are not intended to limit the technique herein disclosed.

Figure 1 shows an orthogonal projection perpendicular to the median plane of the container containing the axis thereof and intersecting the handle, visible on the left side, and dividing it into two equal halves, half of the container being shown in cross-section made according to that plane, wherein the reference numbers represent:

1 - Inner body;
2 - Outer body;
3 - Flap of the inner body;
4 - Flap of the outer body;
5 - Mouth of the inner body;
6 - Mouth of the outer body;
7 - Rim;
8 - Chamber;
9 - Outer wall of the inner body;
10 - Inner wall of the outer body;
11 - Sponge impregnated with fluid;
12 - Bottleneck or bottleneck area;
13 - Clearance;
14 - Nozzle;
15 - Upper edge of the sponge;
16 - Handle;
17 - Handle concavity;
18 - Bottom of the inner body;
19 - Bottom of the outer body;
20 - Side walls.

Figure 2 shows a detailed representation of zone A marked in the previous figure, wherein the reference numbers represent:

3 - Flap of the inner body;
4 - Flap of the outer body;
5 - Mouth of the inner body;
6 - Mouth of the outer body;
13 - Clearance;
14 - Nozzle.

Description of the embodiments

[0025] In the following, different embodiments are presented which are not intended to limit the scope of protection of the present application.

[0026] The present application thus describes a double-body container for cooling beverages and/or for prolonged preservation of beverages at a low temperature.

[0027] In one embodiment, as previously mentioned, with the exception of the sponge impregnated with fluid (11) partially filling the chamber (8), the container is made

of metal, and preferably of aluminum. In another embodiment, the handle may be made of polyoxybenzylmethylenglycolanhydride, commonly known as bakelite.

[0028] In another embodiment, said sponge impregnated with fluid (11) shall be arranged below the bottleneck area (12) and the space in the chamber (8) between the upper edge of the sponge (15) and said bottleneck area (12) - a space with a desirable height of 1 to 2 cm - shall be filled with rubber, thus preventing the part of the container near the rim (7) from freezing.

[0029] Still in the present embodiment, the chamber (8) shall contain two pieces of sponge impregnated with fluid (11), one positioned all the way around the side walls (20) of the two bodies, compressed by such walls and extending to the bottom of the container, and the other leaning against the bottom of the chamber (8) and being trapped thereby, thus preventing it from moving.

[0030] Moreover, the bottom of the inner body (18) and the bottom of the outer body (19) shall be spaced apart about ¼ of the height of the container.

[0031] The present description is of course in no way restricted to the embodiments herein described and a person of ordinary skill in the art will be capable of providing many modification possibilities without departing from the general idea of the invention as defined in the claims. Preferred embodiments described above are obviously combinable with each other. The following claims define further preferred embodiments.

Claims

1. Double-body container for cooling and/or for preservation of beverages at a low temperature, **characterized in that** both the inner body (1) and the outer body (2) are integrally made of metal, and both have a flap surrounding their mouths, respectively (5) and (6), the flap of the inner body (3) juxtaposing the flap of the outer body (4), the latter acting as a stop of the former, the two forming, by means of crimping, a rim (7) which perfectly fixates the two bodies, **in that** a chamber (8) is provided between those two bodies, inaccessible and perfectly sealed, **in that** the volume available in said chamber is all that which is circumscribed by the outer wall of the inner body (9) and by the inner wall of the outer body (10) and **in that** said chamber is filled, although not completely, by a sponge impregnated with fluid (11).

2. Container according to claim 1, **characterized in that** the outer body (2) has, directly below the mouth (6) and around the same, a continuous or discontinuous bottleneck (12), wherein the outer wall of the inner body (9) and the inner wall of the outer body (10) must be perfectly juxtaposed, or with a small clearance (13) in the bottleneck area or areas.

3. Container according to claim 2, **characterized in that** the sponge impregnated with fluid (11) contained in the chamber (8) preferably does not reach the bottleneck area (12).

4. Container according to claim 3, **characterized in that** the sponge impregnated with fluid (11) is 1 to 2 cm below the bottleneck area (12).

5. Container according to claims 3 and 4, **characterized in that** the space in the chamber (8) between the upper edge of the sponge (15) and the bottleneck area is preferably filled with rubber.

6. Container according to claim 2, **characterized in that** it has a handle (16) with a slight concavity (17) in the upper part.

7. Container according to claim 2, **characterized in that** the bottleneck area (12) and the flap of the outer body (4) preferably define a nozzle-shaped curvature (14).

8. Container according to claim 2, **characterized in that**, the chamber (8) preferably contains two pieces of sponge impregnated with fluid (11), one positioned all the way around the side walls (20) of the two bodies, compressed by such walls and extending to the bottom of the container, and the other leaning against the bottom of the chamber (8) and being trapped thereby.

9. Container according to claim 2, **characterized in that**, the bottom of the inner body (18) and the bottom of the outer body (19) are preferably spaced apart about 1/4 of the height of the container.

10. Container according to claims 2 and 6, **characterized in that** the inner body (1), the outer body (2) and the handle (16) of the container are preferably integrally made of aluminum.

11. Container according to claim 6, **characterized in that** the handle (16) is made of bakelite.

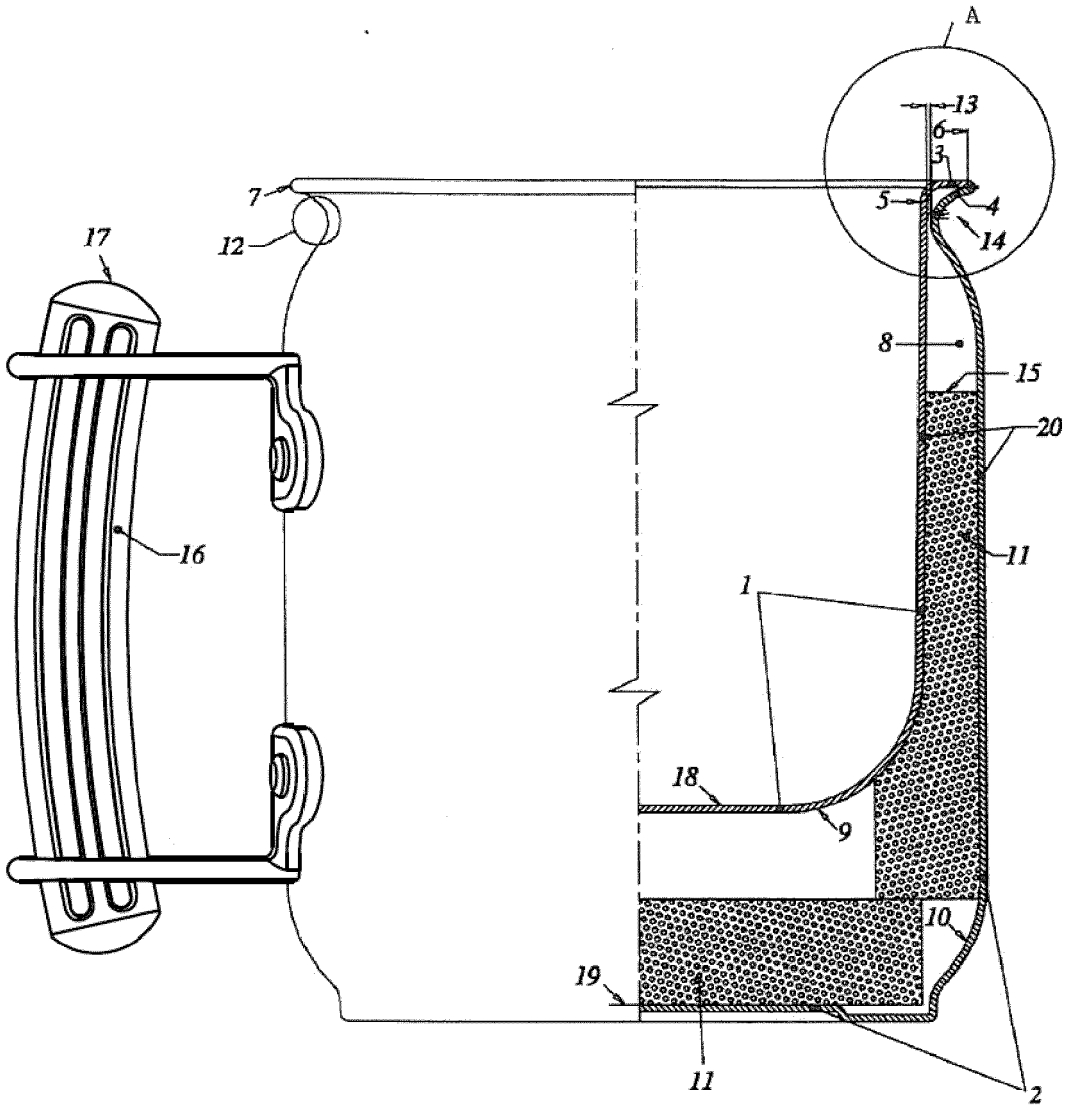

Fig. 1

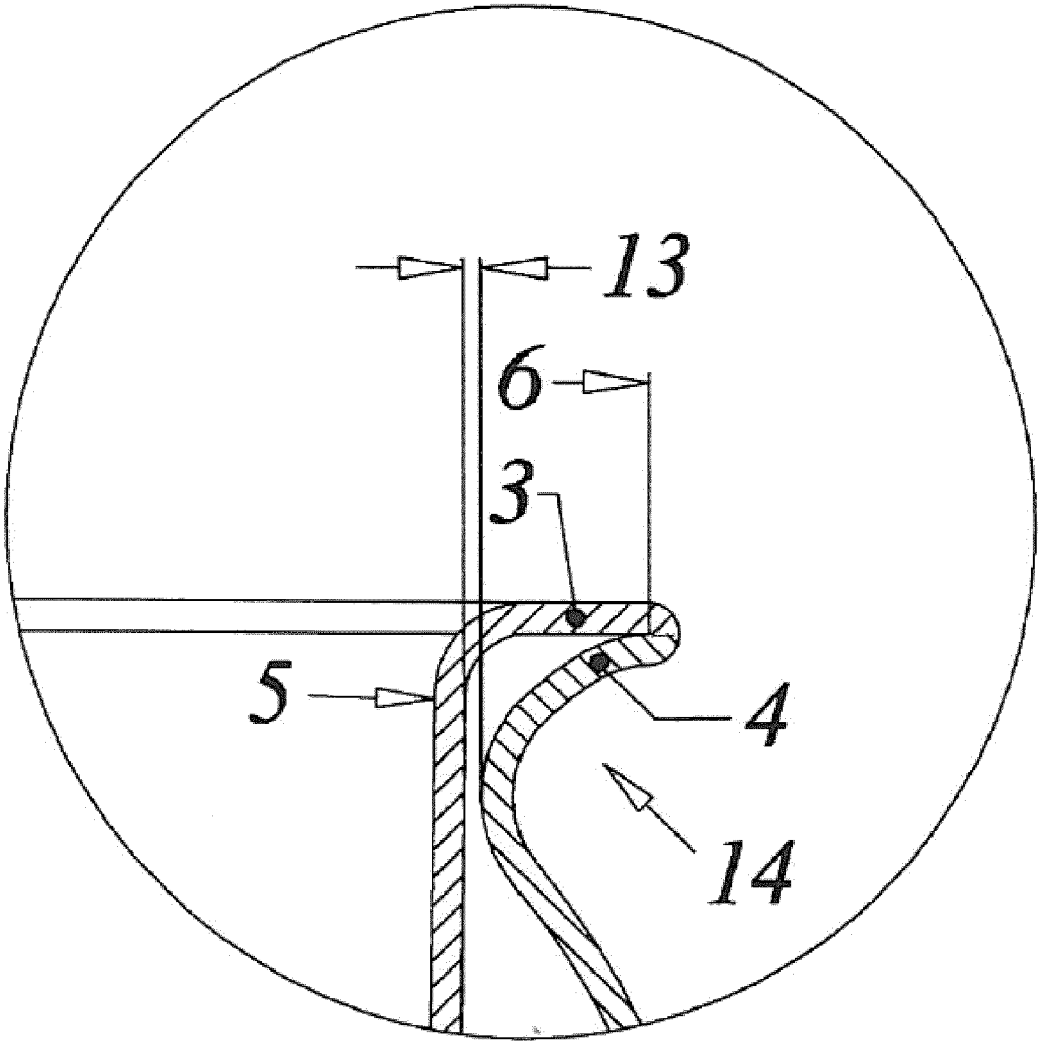

Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 17 39 8002

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 October 2017	Brochado Garganta, M

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 17 39 8002

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