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(54) Double wall container

(57) A container for beverages or the like, comprising a body (1) having a wall (3), an outside skirt (2) apt to near-totally coat said wall (3), and an annular groove (6) obtained onto the wall (3) and projecting internally to the container (1), the groove (6) being apt to provide a support for a respective bottom edge (5) of a skirt (2) of a related container (1) rising thereabove when in the stacked condition.

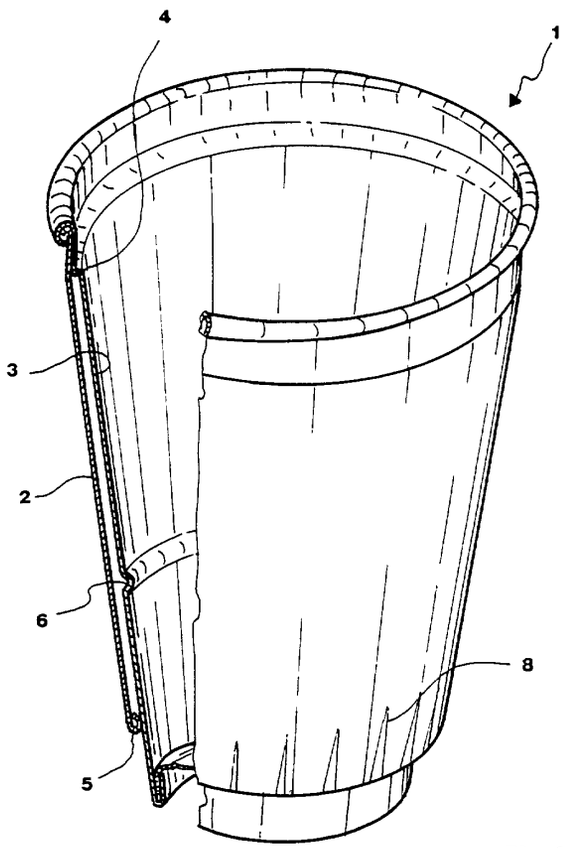

Fig.1

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Description

[0001] The present invention relates to a container for beverages of a type having a double wall in order to insulate the container.

[0002] The general problem of the hot beverage cups in PE cardboard is that of the outside temperature of the cup, excessive with respect to human bearableness limits (empirically assessed to be around 60°C). The hot beverage (coffee, tea, cocoa etc.) is commonly served at a temperature ranging from 80°C to 95°C.

[0003] Notwithstanding the marked thickness of the materials used for this type of cups, the outside temperature of the cup readily (in 30 seconds, max. 1 minute) reaches >80°C values (when the beverage is served at 95°C). At +10 minutes the outside temperature is still >75°C.

[0004] The phenomenon is worsened by the fact that usually the cup is provided with a lid which markedly reduces steam outlet, hence retaining heat for a longer times.

[0005] An empirical method for partially overcoming the problem is that of serving the beverage in two stacked cups. The outside one is dispensed for free and constitutes a support of the inside one, which contains the beverage.

[0006] The temperature at the hand decreases, however maintaining >70°C values for the initial 6 minutes or so, hence proving unacceptable. Moreover, also the cost of manufacturing and dispensing two cups entirely mould-formed for an individual client should be taken into account.

[0007] Various attempts to enhance the level of thermal insulation have been made, among which the couplings of the cups with outside skirts in creased materials, of various shapes and dimensions, pre-assembled or coupled upon serving the beverage, are well-known.

[0008] Such outside skirts tend to reduce the contacting surface between the outside wall of the cup and the inside wall of the skirt and, therefore, the heat transfer.

[0009] Moreover, versions do exist wherein the creased portion lies on the inside (lesser contact with the cup) or on the outside (lesser contact with the fingers). However, when serving that beverages usually the outside temperature remains at >65°C for at least the first 6 minutes. Further the appearance (mouldability, appeal) of the container is anyhow compromised.

[0010] The sole invention truly meeting the requirement of maintaining a ≤60° temperature is polystyrene foam, which however is of quite scanty mouldability and unpleasant to contact with the user's lips.

[0011] A type of cup provided with a wall having three layers, the intermediate thereof being creased, is known. However, the thermal insulation value thereof is still ineffective (>70°C Temperature).

[0012] Therefore, the object of the present invention is to eliminate the abovementioned drawbacks of the beverage containers and cups of the state of the art by providing a "laminated container", having an outside skirt, side heat-sealed like in cups, but bottomless with an inwardly bent rim in the bottom section thereof.

[0013] Hence, the present invention provides a container for beverages or the like comprising a body having a wall, characterised in that it further comprises an outside skirt apt to near-totally coat said wall, the former being fixedly arranged onto said body and externally to the latter and kept spaced therefrom with a groove obtained at the top area of the container and with a bottom edge obtained on said skirt apt to rest onto the wall,

the container being further characterised in that it has an annular groove obtained onto the wall and projecting internally to the container, the groove being apt to provide a support for a respective bottom edge of a skirt of a related container, rising thereabove when in a stacked condition.

[0014] A detailed description of some preferred embodiments of the container of the present invention, given by way of example and not for limitative purposes, will hereinafter be provided. Reference will be made to the annexed drawings, wherein:

figure 1 is a partially sectional perspective view of the container of the present invention according to a first embodiment thereof;
figure 2a is a partially sectional view of a detail of the container of the present invention of figure 1;
figure 2b is a partially sectional view of a further detail of the container of the present invention of figure 1;
figure 3 is a partially sectional perspective view of the container of the present invention according to a second embodiment thereof;
figure 4 is a partially sectional view of a detail of the container of the present invention of figure 3;
figure 5 is a partially sectional perspective view illustrating two containers of the present invention in a stacked condition; and
figure 6 is a partially sectional view illustrating a detail of the containers of figure 3.

[0015] With reference now to figure 1, a cup 1 having an outside skirt 2 whose spacing from the inside wall 3 of the cup gradually increases bottomwise is shown.

[0016] According to the present invention, the spacing between the cup 3 and the outside skirt 2 is maintained substantially and almost constant, by means of forming a "step shaped" groove onto the inside cup. The outside skirt 2 contacts the cup wall 3 at a markedly narrowed area, the area being not lapped by the stationary liquid (the filling mark being provided at a lower height). Below the groove 4 the skirt 2 never comes into contact with the inside wall cup, provided a material of suitable rigidity is selected, therefore air that gap is preserved. The air gap thus formed creates an effective thermal insulation for the hot or cool product contained therein.

[0017] Hence, according to the container of the

present invention, when a hot beverage is contained therein the outside temperature of the skirt is always maintained at ≤60°C Moreover, by virtue of the particular embodiment, the product is easily mouldable and easily decorated, as well as of pleasant appearance, both to the touch and visually.

[0018] With reference now to figures 3 and 4, a second embodiment of the container of the present invention is provided, wherein the outside skirt 2 is maintained spaced from the inside wall 3 at the top section of the container by obtaining a perimetral groove 7 during the cup mould-forming stage. This solution allows to maintain the skirt 2 spaced from the wall 3, differing from the abovedisclosed embodiment in that the outside skirt 2 is not parallelly arranged onto the wall 3 of the container, rather having a divergence starting from above the wall 3 and gradually straying therefrom by means of the groove 7 and of the bottom edge 5.

[0019] With reference now to figure 2a and according to the abovedisclosed embodiments of the container of the present invention, it is provided that the outside skirt 2 have the end flange 5 not necessarily at the same height of the bottom. The former may also be implemented shorter than the whole height of the container wall, in order to make apparent the skirt-inside cup slack, thereby better setting off the product.

[0020] However, such a difference in height prevents the user from touching the scalding region, and a 1-2 mm difference spacing from the height of the cup bottom is provided therefor. This improvement, besides highlighting the presence of a double layer, reduces the paper consumption for the skirt.

[0021] On the other hand, according to the material and to the specific use, in order to reduce the stacking pitch of the cups, it is provided that the rounded edge 5 of the skirt 2 may be 'flattened' during the forming thereof with an additional step in the manufacturing process of the container.

[0022] More precisely, when the outside edge 5 of the skirt 2 has a perfectly rounded shape and during the stacking of a container onto another one, the edge 5 comes much sooner into contact with the inside wall 3 of the subsequent cup, elevating the stacking heights from average values of 6-10 mm for single-skirt cups to 26-30 mm. All this adversely affects handling.

[0023] Therefore, according to a further embodiment of the container of the present invention, the container may have a edge 5 flattened onto the skirt 2. This solution anyhow allows to preserve an air gap of about 1.2 mm, to ensure a level of thermal insulation, and a stacking height improved of about 6-8 mm with respect to the double wall containers of the state of the art.

[0024] On the other hand, it was found that the flattening of the flange further prejudices the stackability of a container into another one, as it eases the sticking up of two cups one inside the other, since the tapers of the outside skirt 2 and of the inside wall 3 of the cup tend to become equivalent.

[0025] To this end, as it is apparent in figures 1 and 5, perimetral grooves 8 in the longitudinal direction and at the bottom section of the skirt 2 may be obtained, so as to avoid a "suction effect" making it difficult to detach one container from another.

[0026] Alternatively, and with particular reference now to figure 6, according to the present invention it is provided that an annular groove 6 be obtained onto the inside wall 3 of the container during the initial mould-forming step of the container. The groove 6 is apt to provide a support for the edge 5 of a skirt of a cup when in the stacked condition.

[0027] To obtain the groove 6 two alternative processes, already object of patent application by the present applicant, may be provided. More precisely, according to a first process, firstly a plane blank apt to make said container 1 once assembled is provided. The blank has an outside surface 2 and an inside surface 3. Then, it is provided that onto the surface 3 the creasing 6, apt to project internally to the container once assembled, be obtained.

[0028] Alternatively, a second process for implementing the container 1 of the present invention, wherein the pre-process blank be plain, may be provided. Then, the latter is arranged on a revolving supporting member of a mould-forming apparatus. The revolving supporting member has on the surface thereof a perimetral groove apt to obtain a respective creasing 6 onto the surface 3 of the container 1 when the supporting member engages to a complementary outside knurl.

Claims

1. A container (1) for beverages or the like comprising a main body (1) having a wall (3),
   characterised in that it further comprises means (2) for covering said wall (3) fixedly arranged on said wall (3),

2. The container (1) for beverages according to the preceding claim, wherein said covering means is an outside skirt (2) connected to the top edge section of said container (1).

3. The container (1) for beverages according to claim 1 or 2, wherein said skirt (2) is apt to near-totally coat said wall (3).

4. The container (1) for beverages according to claim 2 or 3, wherein said skirt (2) further has a bottom edge (5) obtained onto said skirt (2) apt to rest onto said wall (3).

5. The container (1) for beverages according to claim 2 or 3 or 4, further comprising a groove (4) obtained at the top area of the container (1) apt to maintain said skirt (2) spaced from the wall (3).

6. The container (1) for beverages according to claim 2 or 3 or 4, further comprising an annular groove (7) obtained at the top and/or median area of the wall (3) of the container (1) apt to maintain said skirt (2) spaced from the wall (3).

7. The container (1) for beverages according to any one of the preceding claims, further comprising means (6) for supporting a respective container (1) in a stacked condition inside of said wall (3).

8. The container (1) for beverages according to the preceding claim, wherein said supporting means is an annular groove (6) obtained onto the wall (3) and projecting internally to the container (1), the groove (6) being apt to provide a support for a respective bottom edge (5) of a skirt (2) of a related container (1) rising thereabove when in the stacked condition.

9. The container (1) for beverages according to any one of the preceding claims, further comprising a plurality of grooves (8) obtained at the bottom edge area (5) of said skirt (2) of the container (1).

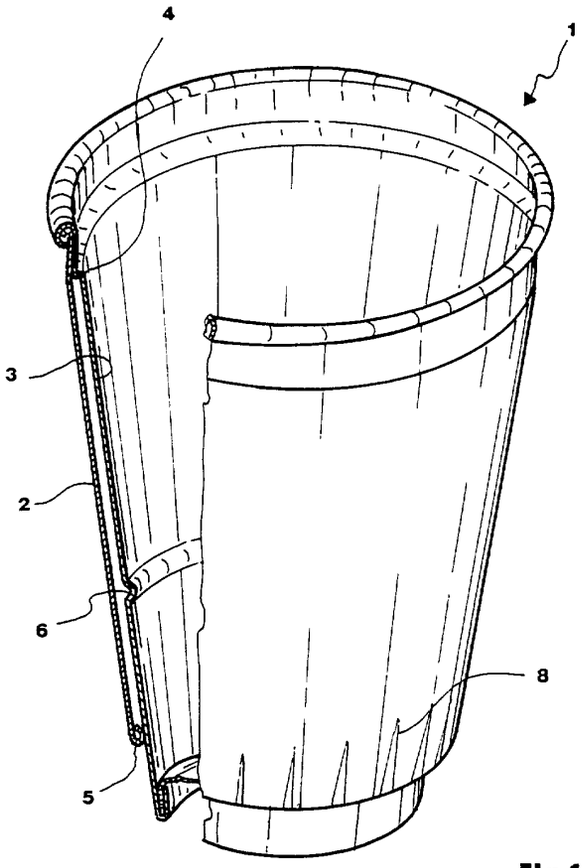

Fig.1

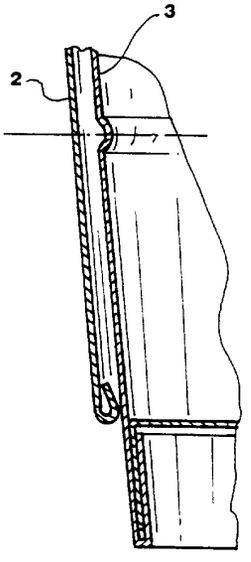

Fig.2a

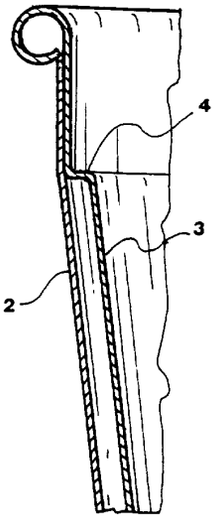

Fig.2b

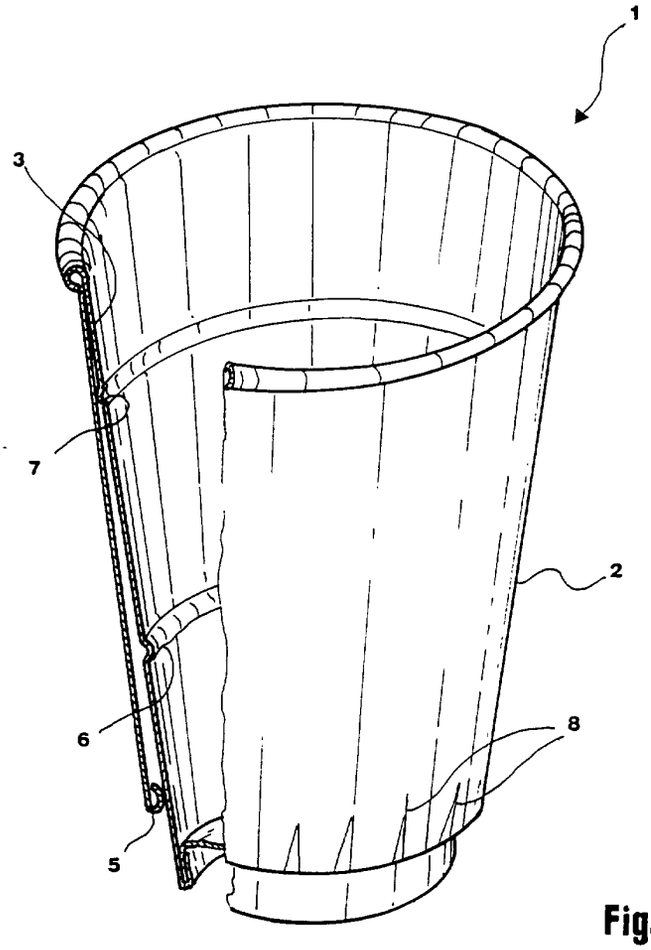

Fig.3

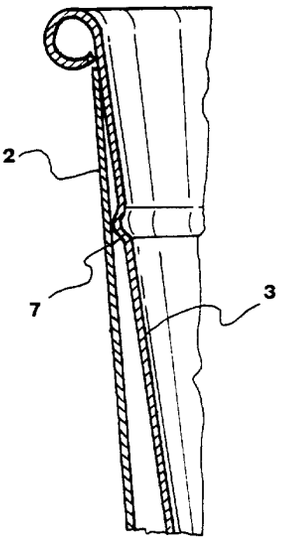

Fig.4

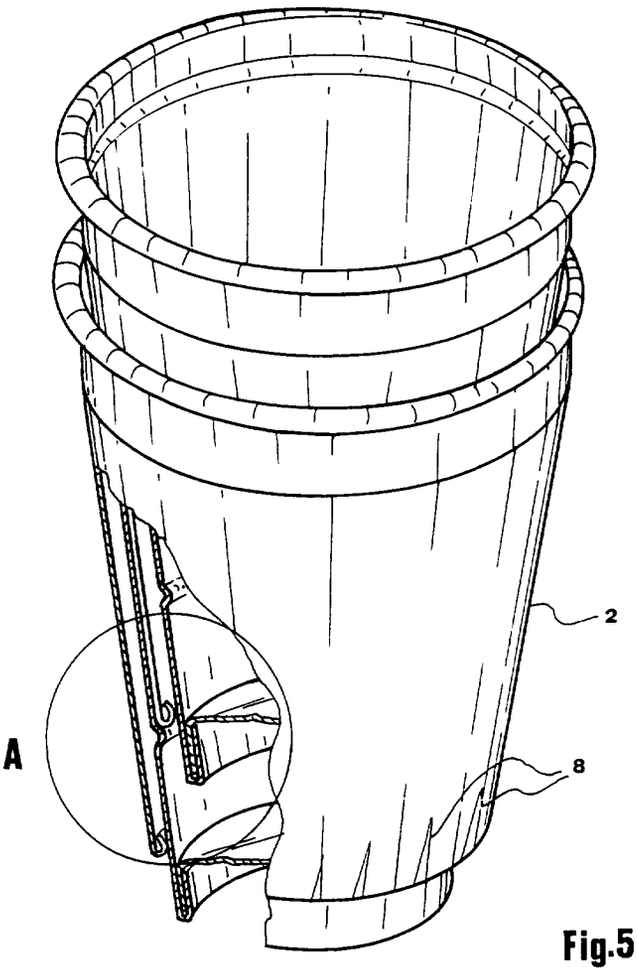

Fig.5

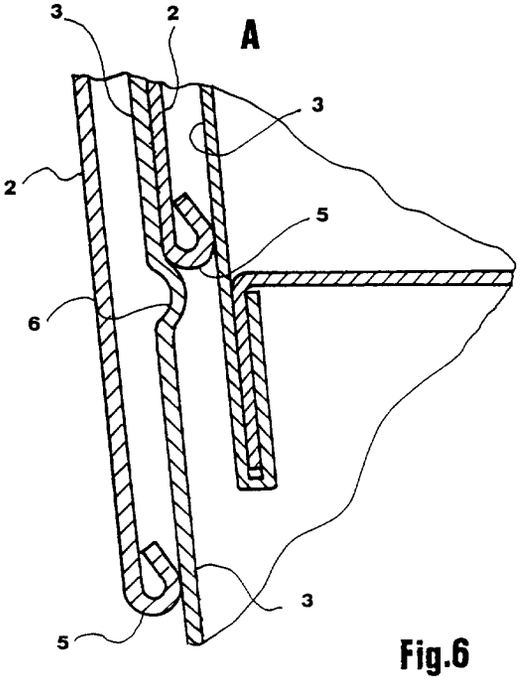

Fig.6

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EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0153

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 1 031 514 A (DAINIPPON PRINTING CO LTD) 30 August 2000 (2000-08-30) * page 3, line 46 - page 4, line 36; figures 1C,3A,4A *	1-7	B65D3/22 B65D3/06
X	US 5 542 599 A (SOBOL RONALD E) 6 August 1996 (1996-08-06) * column 2, line 66 - column 3, line 26 * * figure 1 *	1-4	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B65D
B31C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	13 August 2001	Scheuer, J

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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13-08-2001

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