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(54) **Thermally insulated container of the portable type**

(57) Thermally insulated container of the portable type, whose body (10) is constituted by a plurality of annular bands (15) that are mutually connected telescopically. Inside this body there is housed a flexible

bag (25) of insulating material that is fixed to a shaped ring (14) co-operating with the upper band of the body (10).

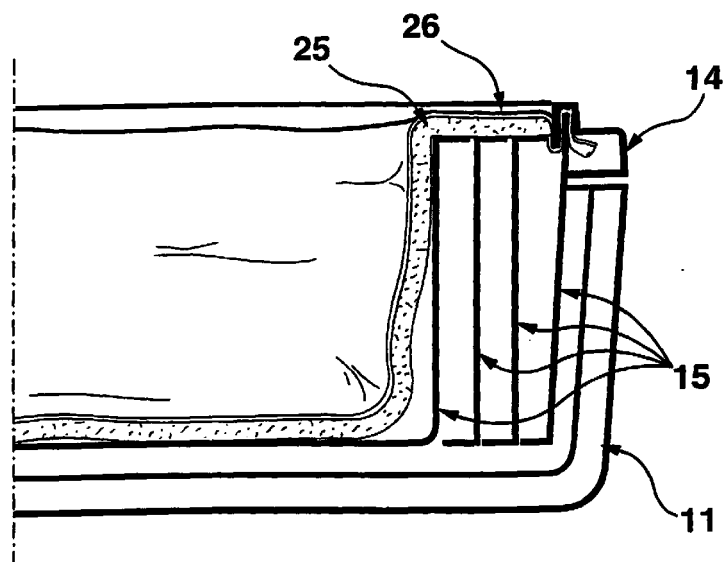


FIG. 5

EP 1 095 586 A1

Description

[0001] The present invention refers to a thermally insulated container of the portable type, which is used to transport foodstuffs, in particular in connection with outdoor leisure activities, such as the ones involving camping or the like.

[0002] Portable-type thermally insulated containers are usually made of a plastic material and are formed by a main body having a parallelepiped or cylindrical shape, the upper aperture of which is dosed by an appropriate cover. Said main body is provided with handles or straps for lifting it up and carrying it. The walls of the body, and possibly also the cover, are hollow internally, while the so formed cavities are sealed hermetically and either evacuated or filled with an insulating material such as polyurethane. The main drawback of such a container type lies in the fact that the container itself has a rigid construction and takes up a lot of space, ie. is quite bulky and encumbering, when not in use. As a result, quite serious problems derive in terms of both storage and transport convenience and costs.

[0003] Thermally insulated containers of the foldable type are furthermore known in the art, whose walls are mutually hinged so as to enable them to be folded over each other when the container is empty. A container of this type is described for instance in US-A-5,857,778. In this case, the thermal insulation of the container is obtained by making the walls and the cover thereof using laminated materials that are capable of reflecting the radiant energy. This solution does away with the problem of the container taking up a lot of space and being cumbersome when not in use, but its construction is anyway quite complicated and expensive owing to the system needed for joining together the various parts that make up the container, as well as the particular materials that need to be used.

[0004] It therefore is a purpose of the present invention to provide a thermally insulated container of the portable type that enables its overall size, ie. space requirements, to be reduced when not in use, thanks to a particularly simple and rational construction thereof.

[0005] Such an aim is reached in a thermally insulated container of the portable type, comprising a body, a dosing lid and a handle, or a strap, for lifting it up and carrying it around, characterized in that the body is formed by a plurality of annular bands that are mutually connected so as to be able to extend and retract telescopically, a flexible bag of insulating material being housed inside the body.

[0006] The features and advantages of the present invention will anyway be more clearly and readily understood from the description that is given below by way of non-limiting example with reference to the accompanying drawings, in which:

- Figure 1 is a perspective view of a container according to the present invention;

- Figure 2 is a schematical, partially cross-sectional side view of the container illustrated in Figure 1;

- Figure 3 is a schematical, partially cross-sectional side view of the container illustrated in Figure 1, in retracted position when at rest, ie. not in use;

- Figure 4 is a partially cross-sectional view of a detail of the container according to the present invention;

- Figure 5 is a partially cross-sectional view of a further detail of the container according to the present invention.

[0007] The container whose perspective view is illustrated in Figure 1 is made of plastic material and is substantially constituted by a body 10, a cover or lid 11 that closes the body at the upper portion thereof, and a strap 12 to lift up and carry the container.

[0008] According to the present invention, the body 10 of the container is formed by a sealed bottom 13, an upper ring 14 and a plurality of intermediate annular bands 15 (Figure 2). The bands 15 have differing dimensions with respect to each other and are connected to each other in such a manner as to be able to extend and retract telescopically in the vertical direction. In an advantageous manner, each band 15 is slightly flared upwards and has a larger size than the band immediately therebelow.

[0009] More precisely, the upper and lower annular edges of each band 15 are provided with respective perimetral lips 16 adapted to engage corresponding lips of the contiguous bands, so as to confer solidity to the body 10 when all bands are in their extended position.

[0010] The bottom 13 has the form of a pan and also its free edge is provided with a perimetral lip engaging the lower lip of the band 15 thereabove.

[0011] The lips 16 of the bottom 13 and the bands 15 can connect to each other by any of a number of different engagement means, such as for instance a snap-fitting engagement that makes use of the inherent elasticity of the plastic material (Figure 4). A lip is provided with a protruding tooth 20 that gets inserted in an aperture 21 provided in the corresponding lip of the contiguous band 15.

[0012] Moreover, the band 15 constituting the upper portion of the body 10 is provided with a rib 22 (Figures 2 and 3) that extends upwards from the respective peripheral lip 16. The rib 22 is adapted to co-operate with the shaped ring 14 that has an inner cuff 23 forming a recess in which the rib 22 gets inserted. The ring 14 furthermore has a horizontal edge 24 on which the edge of the cover 11 (Figure 2) rests so as to close the container at the upper portion thereof, when the same container is in its use condition, ie. is being used.

[0013] The container according to the present invention, thanks to such assembly of the telescopic

type of the elements forming the body 10 thereof, makes it possible for the size and therefore the space requirements thereof to be reduced when it is no longer being used. In fact, by disengaging their perimetral edges 16 from each other, the bands 15 can be closely packed together (Figure 3) by letting them penetrate each other. The assembly of the so compacted bands is then advantageously inserted inside the cover 11 that is suitably turned upside down.

[0014] In order to ensure the thermal insulation of the container, inside the body 10 there is inserted a flexible bag 25 of insulating material, such as polyurethane or polystyrene, preferably clad with a film 26 of food-grade impermeable and washable material, so as to improve cleaning and ensure the hygiene of the container (Figure 5). The bag 25 and the film 26 are kept in position by inserting their edges between the rib 22 of the upper band 15 and the cuff 23 of the ring 14, so as to cause them to be retained, while however being able to release them each time that a need thereto arises, eg. in view of a possible maintenance or a replacement of the insulation. The described solution is very simple and effective, since it automatically adapts to the conditions of the container when the latter is being used or is not in use.

[0015] Conclusively it can be therefore stated that the thermally insulated container of the portable type according to the present invention, while ensuring the same performance standards as prior-art containers, enables the storage and transport space requirements to be reduced by approx. two thirds, with a resulting benefit, even of an economic nature, for both manufacturer and user.

Claims

1. Thermally insulated container of the portable type, comprising a body, a closing cover and a handle, or a strap, for lifting it up and carrying it, **characterized in that** the body (10) comprises a plurality of annular bands (15) that are mutually connected so as to be able to extend and retract telescopically, a flexible bag (25) of insulating material being housed inside the body (10).
2. Thermally insulated container according to claim 1, **characterized in that** the annular bands (15) are provided with perimetral lips (16) that are capable of engaging each other by means of snap-fitting means (20, 21).
3. Thermally insulated container according to claim 1 or 2, **characterized in that** the band (15) constituting the upper portion of the body (10) is provided with a rib (22) extending upwards and adapted to cooperate with a shaped ring (14) that has an inner cuff (23) forming a recess in which the rib (22) gets inserted.

4. Thermally insulated container according to claim 3, **characterized in that** the ring (14) has a horizontal edge (24) on which the edge of the cover (11) rests so as to close the container at the upper portion thereof, when the same container is not in use.
5. Thermally insulated container according to any of the preceding claims **characterized in that** the flexible bag (25) of insulating material is preferably clad with a film (26) of impermeable material, the bag (25) and the film (26) being kept in position by inserting their edges between the rib (22) of the upper band (15) and the cuff (23) of the ring (14).

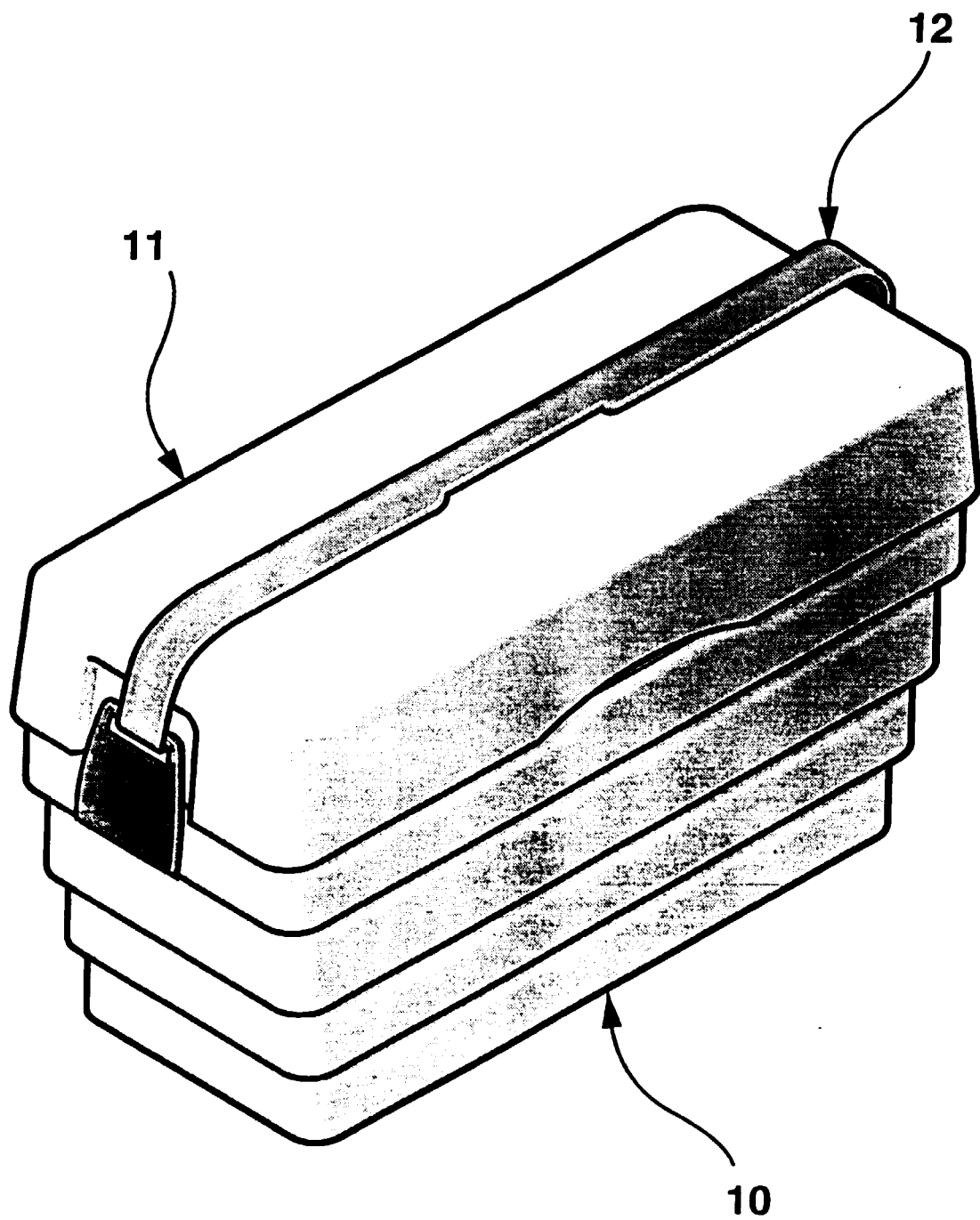


FIG. 1

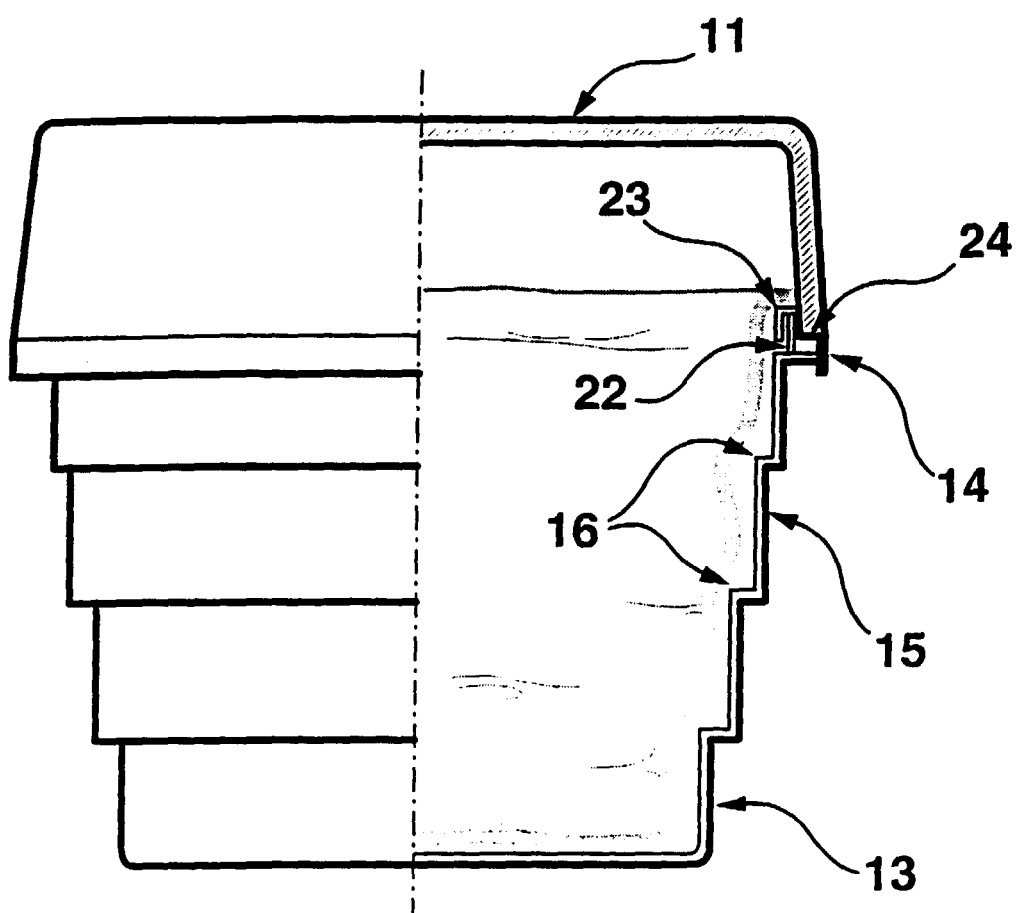


FIG. 2

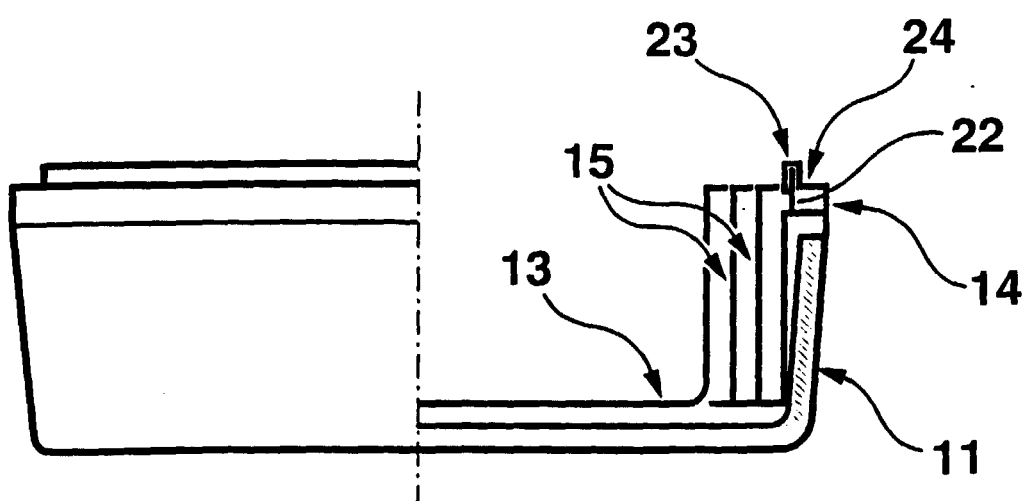


FIG. 3

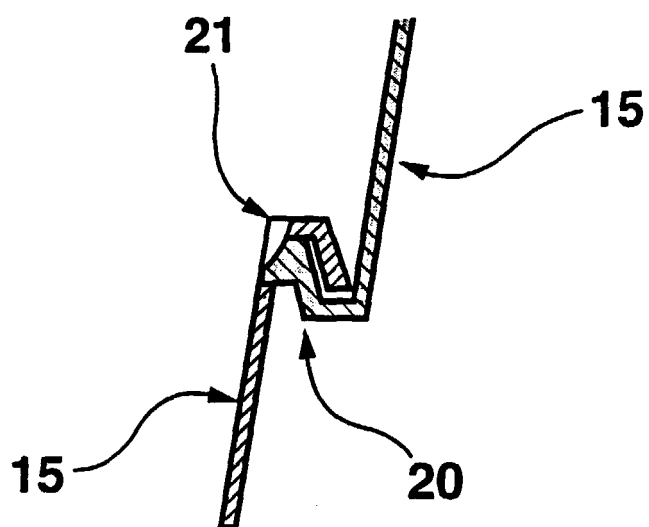


FIG. 4

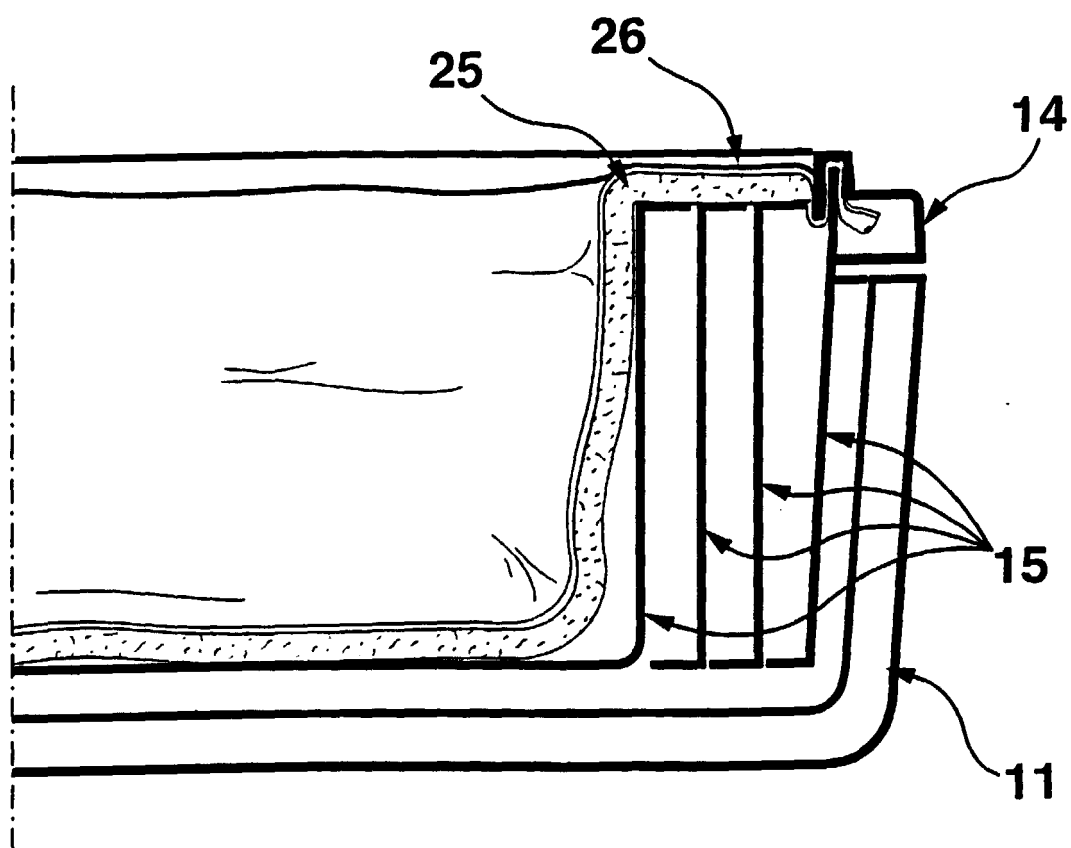


FIG. 5



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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 6501

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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
THE HAGUE		15 February 2001	Sigwalt, C
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 00 11 6501

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15-02-2001

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