

An Insulated Carry Bag

Field of the Invention

- 5 This invention relates to carry bags of the type that are typically carried by women that include an insulated interior or compartment.

Background of the Invention

- 10 It is quite common when going to restaurants, visiting with friends, or going on picnics etc, to carry food and/or drink to consume at the destination in a bag. Quite often it is desirable to keep the food and/or drink either chilled or warm with respect to ambient temperature conditions surrounding the bag.

- 15 There are many insulated carry bags on the market, however these tend to be large and bulky, and do not include the fit and finish of a fashion carry bag of the type typically carried by women. The bags commonly available are very utilitarian in nature.

- Another problem relates to the multi-use aspect of insulated bags. Sometimes it is
20 desirable to carry objects that are to be kept warmer than ambient temperature, such as food, and at other times, it is desirable to carry items that need to be kept cooler than ambient temperature, such as when carrying cosmetics, pharmaceuticals or drinks etc. This may be difficult to achieve with a single bag if the bag has just been used to carry a warm item, then it needs to carry items that need to be kept cool.

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It is an object of the present invention to provide a carry bag that is fashionable and attractive, particularly to women, that at least mitigates some of the aforementioned problems.

- 30 **Summary of the Invention**

Accordingly, the present invention is a carry bag including a body, and at least one handle, wherein the body of the bag is hollow, and dimensioned so that it can receive

items that are to be kept either cooler or warmer than the ambient temperature surrounding the bag. At least the sidewalls are constructed from a combination of a tough and durable outer layer, that corresponds to the exterior side wall of the body of the bag, and an insulative and pliable foam filling, and a tough and durable heat
5 reflective layer, that corresponds with the interior side wall of the body of the bag, and wherein the foam filling is sandwiched between the outer and interior side walls of the body. At least the body of the bag is sealable by way of suitable primary releasable sealing means, so that the objects placed inside the bag are subsequently completely enveloped by the body of the bag.

10 Preferably, the body of the bag includes a shock absorbing layer in the base of the body, and the shock absorbing layer mitigates the impact when the bag is placed upon a hard surface, such as a benchtop or the like, and wherein the shock absorbing layer also provides further insulative properties to the interior of the body of the bag.

15 Preferably, the body of the bag is elongated and is particularly suited for use with a tall bottle, for example a wine bottle, or a bladder with tapping means, and the body includes an aperture at one end that enables a user to manipulate the bottle within the bag so that a suitable portion of the bottle's neck is able to protrude from the body of
20 the bag, through the aperture, without the need to open the primary releasable sealing means, or alternatively, allow the user to manipulate the tapping means of the bladder through the aperture, and when not in use, the aperture includes an insulative flap that keeps the aperture closed.

25 Preferably, at least the sidewalls of the body include refrigeratable or freezable portions that can either be inserted into corresponding pockets built into the sidewalls of the body, or are permanently incorporated into the sidewalls, and the refrigeratable or freezable portions remain pliable, even at normal domestic freezer temperatures.

30 Preferably, the body of the bag includes a separate inner bag that is removable by a user of the bag, and the inner bag includes a heat reflective inner wall, and an outer wall, and in the inner bag includes a freezable, or refrigeratable, filling that is sandwiched between the inner bag's inner and outer walls, and wherein the bag remains

pliable, even at the freezing temperatures reached by normal domestic freezers. One particular bag body may be associated with a plurality of inner bags, any one of which may be used with the body at any one time.

- 5 Preferably, the separate inner bag includes an aperture that is adapted to enable a user to manipulate the opening of an object, such as the pouring end of a bottle, or the tap of a beverage bladder, to protrude through the inner bag aperture, and when the inner bag is placed within the body of the bag, the inner bag aperture, and any object protruding through it is adapted to align with the corresponding aperture in the body of
10 the bag so that the contents of the object are accessible from the body of the bag without a need to open the primary releasable sealing means.

- Preferably, the separate inner bag includes releasable sealing means so that the inner bag can substantially close around the entire object, except the portion protruding
15 through the aperture, and when the inner bag is properly placed within the body of the bag, the releasable sealing means of the inner bag aligns with the primary releasable sealing means of the body of the bag.

- Preferably, the primary releasable sealing means and the inner bag releasable sealing
20 means are zippers, and when the inner bag is properly placed within the body of the bag, the respective zippers of the inner bag and the body of the bag may be interconnected, so that both zippers may be operated simultaneously by the opening and closing of the primary releasable sealing means.

- 25 Preferably, the aperture in the body of the bag includes covering means that significantly conceal the presence of the aperture when the contents of the object are not being accessed.

- In another form of the present invention, the body of the bag includes a separate inner
30 bag that is removable by a user of the bag, and the inner bag includes a heat reflective inner wall, and an outer wall, and in the inner bag includes a thermally insulative filling that combines with the heat reflective inner wall to provide substantial heat insulation

properties to the cavity within the inner bag so that any heated object placed within the inner bag remains at an elevated temperature for a significant period of time, when compared to the ambient temperature surrounding the body of the bag. Any one of a plurality of thermally insulative inner bags can be used with the body at any one time.

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Preferably, the thermally insulative filling further includes thermal retention material that is suitable for retaining the heat energy it absorbs for an extended period of time.

Preferably, the inner bag is microwavable in order to provide heat energy to the thermal retention material.

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Brief Description of the Drawings

In order that the invention may be more fully understood, there will now be described, by way of example only, preferred embodiments and other elements of the invention with reference to the accompanying drawings where:

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Figure 1 is an isometric side view of the present invention showing typical contents for the bag in dashed lines.

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Figures 2 and 3 show views of another form of the present invention including an aperture to enable a portion of the neck of a bottle stored within the bag to be extended through the aperture.

Figure 4 is a sectional end view of the body used in one form of the present invention.

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Figure 5 shows a sectional end view of another form of the present invention where a shock absorbing layer is included in the base of the body of the bag.

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Figure 6 is a sectional end view of another embodiment of the present invention where refrigeratable or freezable packs are either incorporated into the side walls of the body of the bag, or are insertable into corresponding pockets in the side walls.

Figures 7, 8 and 9 are sectional end views of another embodiment of the present invention.

Description of Examples of the Invention and the Preferred Embodiment

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Turning firstly to Figure 1, we can see a compact carry bag 1 that includes a body 3 and a pair of handles 5. The body in this example is elongated, and includes a releasable fastening means 7 along the top of the body. In this form of the invention, the bag is suitable for carrying a bottle of wine 9, shown in hidden detail in the Figure. The bag is constructed so that it looks like a lady's fashion hand bag from the exterior, however at least the sidewalls of the body 3 have insulative properties. Typically, at least the exterior side and end walls of the body are fabricated from a tough, pliable and attractive material, such as faux leather polymer, or real leather. At least the interior side and end walls of the body are fabricated out of a radiant heat reflective material that is both durable, pliable, and waterproof. In this example a durable thermally insulative aluminium foil material is used. A thermally insulative and pliable foam material is sandwiched between the out and inner walls of the body. The interior of the body of the bag thereby creates a zone where cold items, such as a chilled bottle of wine for example, that are placed within the bag, remain cooler than the ambient temperature in the vicinity of the bag, for a longer period than they otherwise would.

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The pair of handles 5 are adapted to move apart when not in use so that they do not obstruct the opening of the body 3 of the bag 1 when placing or removing items from the interior of the body 3 of the bag 1.

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Turning to Figures 2 and 3, we are shown another preferred embodiment of the invention where an aperture 19 is included in one end of the body 3 of the bag 1. The aperture 19 is suitably positioned to enable a user of the bag to manipulate the bottle 9 so that a portion of its neck may protrude through the aperture 19. When not in use, the aperture 19 is kept closed by the flap 17. This arrangement enables a user to dispense contents from the bottle 9 without fully opening the body 3 of the bag and exposing the contents of the bag to ambient temperature. The flap 17 may be held in place over the aperture 19 when not in use via a hook loop fastener 21.

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Turning to Figure 4, where we are shown one form of the present invention in end sectional view of the body 3 of the bag. This view better illustrates how the bag is constructed. The outer layer 11 is designed to be both tough, pliable and attractive, and is suitable for use on a lady's fashion item. The inner surface 15 comprises a durable thermally insulative aluminium foil, and a suitable thermally insulative foam material is sandwiched between the inner and outer sidewalls 15 and 13 respectively. The releasable fastening means 7 may be any suitable type, but the most common type is a zip fastener.

Turning to Figure 5, we are shown another embodiment of the present invention, where a shock absorbing element 23 is included in the base of the body 3. This gives fragile items, such as glass bottles and the like some protection against the shock that may be incurred when the bag is placed down upon a hard object, such as a bench, or table, or the like.

Turning to Figure 6, we are shown another embodiment of the present invention where refrigeratable, or freezable packs 25 are included. These can be pre-frozen, or refrigerated, and then inserted into corresponding pockets within the interior of body 3 of the bag 1, or alternatively, these can be incorporated permanently into the sidewalls. In that arrangement, the entire bag 1 can be stored in the refrigerator or freezer prior to use. The packs 25 have the property of remaining pliable, even when stored for a long time in a typical domestic freezer.

In Figures 7 through to 9, we are shown an illustration of yet another embodiment of the present invention. In this embodiment, the body of the bag 3 includes a removable inner bag 27. The inner bag 27 includes a thermally reflective skin that makes the inner wall 15, and optionally, the same material can be used as the inner bag's 27 outer wall 29. A freezer/refrigerator pack 25 is sandwiched between the inner and out walls. Making the inner bag 27 removable, it means that a user can reach inside the outer body 3 and remove the inner bag 27. The bag can then be placed in a refrigerator or freezer prior to use. Several inner bags 25 can be used in association with the outer body 3.

In any of the preferred embodiments, the insulated interior of the bag is washable, and suitable for carrying food, drink, or any other item that needs to be kept hot or cold, like pharmaceuticals, or some women's cosmetics etc.

- 5 While the above description includes the preferred embodiments of the invention, it is to be understood that many variations, alterations, modifications and/or additions may be introduced into the constructions and arrangements of parts previously described without departing from the essential features or the spirit or ambit of the invention.
- 10 It will be also understood that where the word "comprise", and variations such as "comprises" and "comprising", are used in this specification, unless the context requires otherwise such use is intended to imply the inclusion of a stated feature or features but is not to be taken as excluding the presence of other feature or features.
- 15 The reference to any prior art in this specification is not, and should not be taken as, an acknowledgment or any form of suggestion that such prior art forms part of the common general knowledge.

Claims

1. A carry bag including a body, and at least one handle, wherein the body of the bag is hollow, and dimensioned so that it can receive items that are to be kept
5 either cooler or warmer than the ambient temperature surrounding the bag, and wherein at least the sidewalls are constructed from a combination of a tough and durable outer layer, that corresponds to the exterior side wall of the body of the bag, and an insulative and pliable foam filling, and a tough and durable heat reflective layer, that corresponds with the interior side wall of the body of the
10 bag, and wherein the foam filling is sandwiched between the outer and interior side walls of the body, and wherein at least the body of the bag is sealable by way of suitable primary releasable sealing means, so that the objects placed inside the bag are subsequently completely enveloped by the body of the bag.
- 15 2. A carry bag as defined in claim 1 wherein the body of the bag includes a shock absorbing layer in the base of the body, and the shock absorbing layer mitigates the impact when the bag is placed upon a hard surface, such as a benchtop or the like, and wherein the shock absorbing layer also provides further insulative properties to the interior of the body of the bag.
- 20 3. A carry bag as defined in either claim 1 wherein the body of the bag is elongated and is particularly suited for use with a tall bottle, for example a wine bottle, or a bladder with tapping means, and the body includes an aperture at one end that enables a user to manipulate the bottle within the bag so that a suitable portion of
25 the bottle's neck is able to protrude from the body of the bag, through the aperture, without the need to open the primary releasable sealing means, or alternatively, allow the user to manipulate the tapping means of the bladder through the aperture, and when not in use, the aperture includes an insulative flap that keeps the aperture closed.
- 30 4. A carry bag as defined in any previous claim wherein at least the sidewalls of the body include refrigeratable or freezable portions that can either be inserted into corresponding pockets built into the sidewalls of the body, or are permanently

incorporated into the sidewalls, and the refrigeratable or freezable portions remain pliable, even at normal domestic freezer temperatures.

5. A carry bag as defined in claim 1 wherein the body of the bag includes a separate inner bag that is removable by a user of the bag, and the inner bag includes a heat reflective inner wall, and an outer wall, and in the inner bag includes a freezable, or refrigeratable, filling that is sandwiched between the inner bag's inner and outer walls, and wherein the bag remains pliable, even at the freezing temperatures reached by normal domestic freezers, and wherein any one of a plurality of inner bags can be used with the body at any one time.
6. A carry bag as defined in claim 5 wherein the separate inner bag includes an aperture that is adapted to enable a user to manipulate the opening of an object, such as the pouring end of a bottle, or the tap of a beverage bladder, to protrude through the inner bag aperture, and when the inner bag is placed within the body of the bag, the inner bag aperture, and any object protruding through it is adapted to align with the corresponding aperture in the body of the bag so that the contents of the object are accessible from the body of the bag without a need to open the primary releasable sealing means.
7. A carry bag as defined in claim 6 wherein the separate inner bag includes releasable sealing means so that the inner bag can substantially close around the entire object, except the portion protruding through the aperture, and when the inner bag is properly placed within the body of the bag, the releasable sealing means of the inner bag aligns with the primary releasable sealing means of the body of the bag.
8. A carry bag as defined in claim 7 wherein the primary releasable sealing means and the inner bag releasable sealing means are zippers, and when the inner bag is properly placed within the body of the bag, the respective zippers of the inner bag and the body of the bag may be interconnected, so that both zippers may be operated simultaneously by the opening and closing of the primary releasable sealing means.

9. A carry bag as defined in claim 8 wherein the aperture in the body of the bag includes covering means that significantly conceal the presence of the aperture when the contents of the contents of the object are not being accessed.
- 5 10. A carry bag as defined in claim 1 wherein the body of the bag includes a separate inner bag that is removable by a user of the bag, and the inner bag includes a heat reflective inner wall, and an outer wall, and in the inner bag includes a thermally insulative filling that combines with the heat reflective inner wall to provide substantial heat insulation properties to the cavity within the inner bag so that any
10 heated object placed within the inner bag remains at an elevated temperature for a significant period of time, when compared to the ambient temperature surrounding the body of the bag, and wherein any one of a plurality of thermally insulative inner bags can be used with the body at any one time.
11. A carry bag as defined in claim 10 wherein the thermally insulative filling further
15 includes thermal retention material that is suitable for retaining the heat energy it absorbs for an extended period of time.
12. A carry bag as defined in claim 11 wherein the inner bag is microwavable in order to provide heat energy to the thermal retention material.

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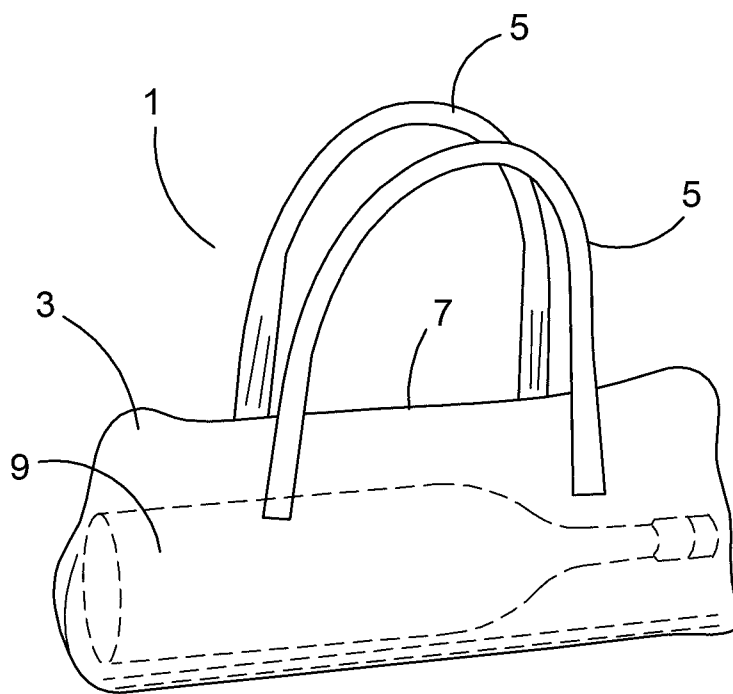


Figure 1

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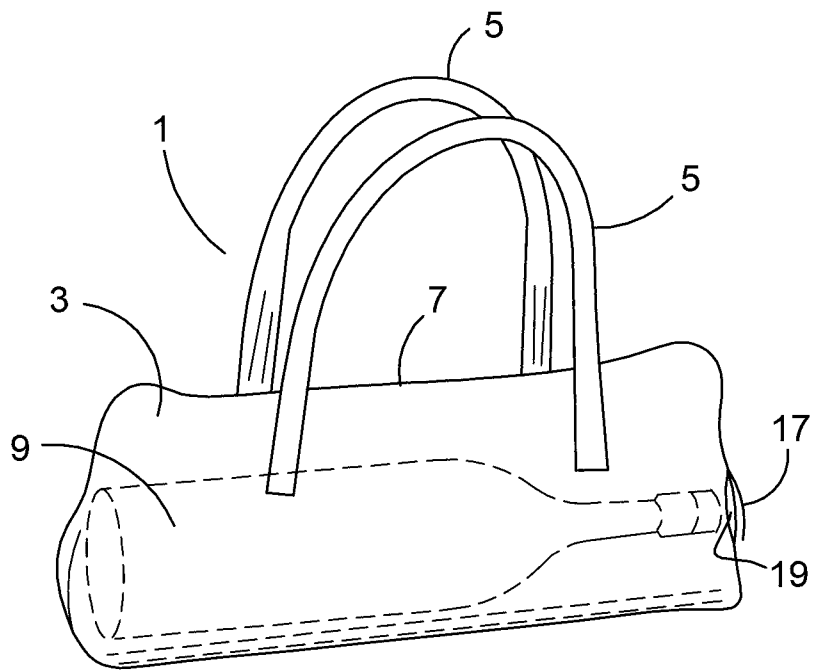


Figure 2

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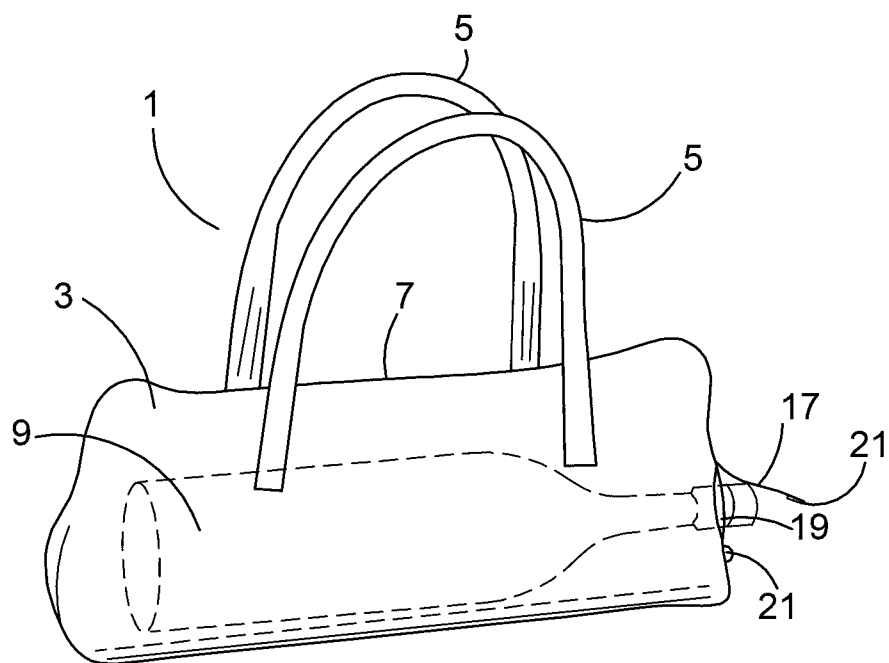


Figure 3

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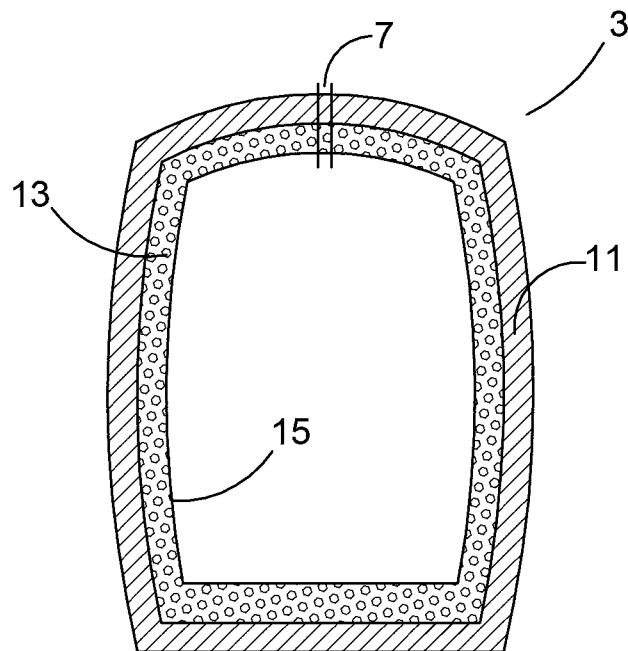


Figure 4

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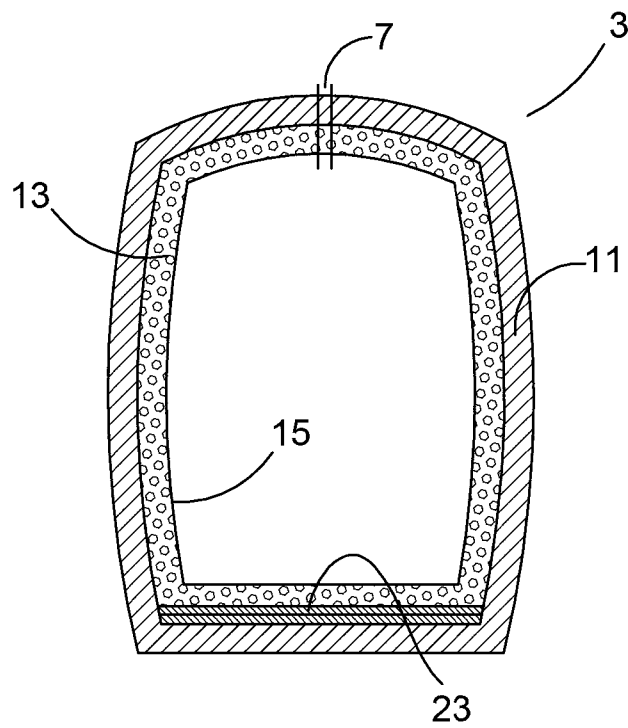


Figure 5

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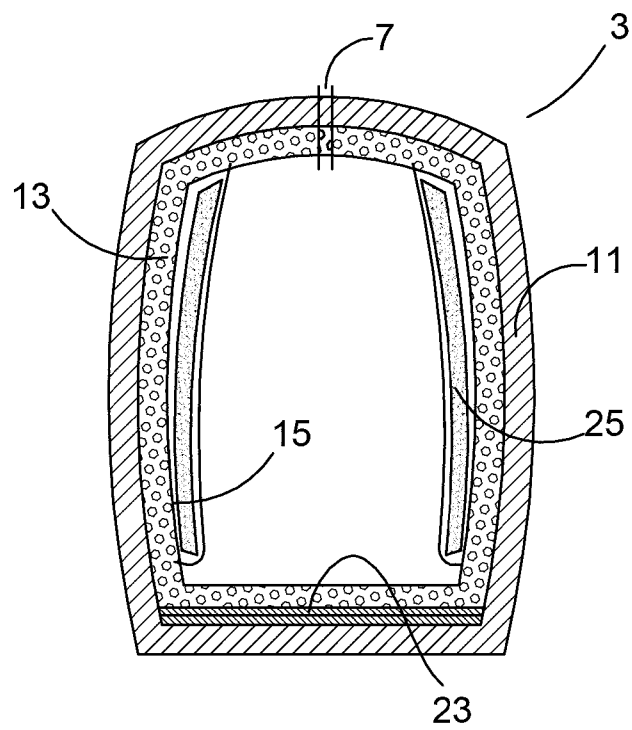


Figure 6

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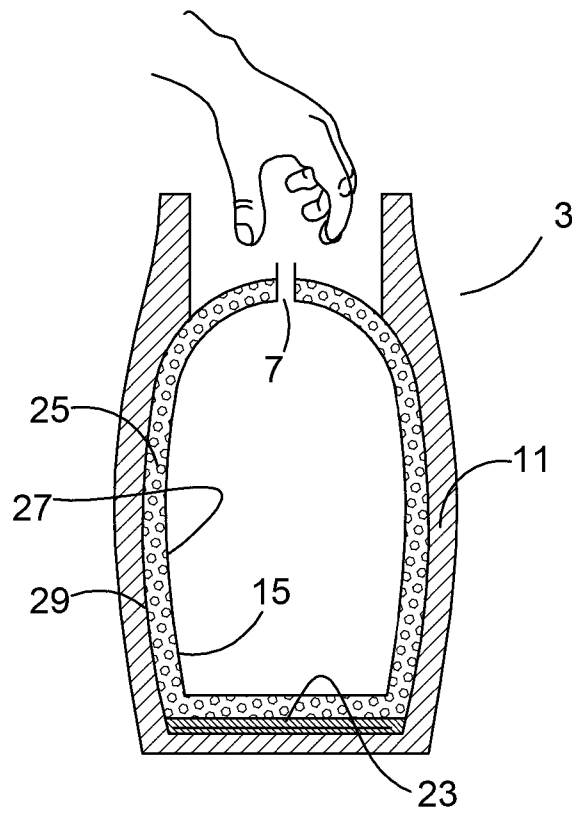


Figure 7

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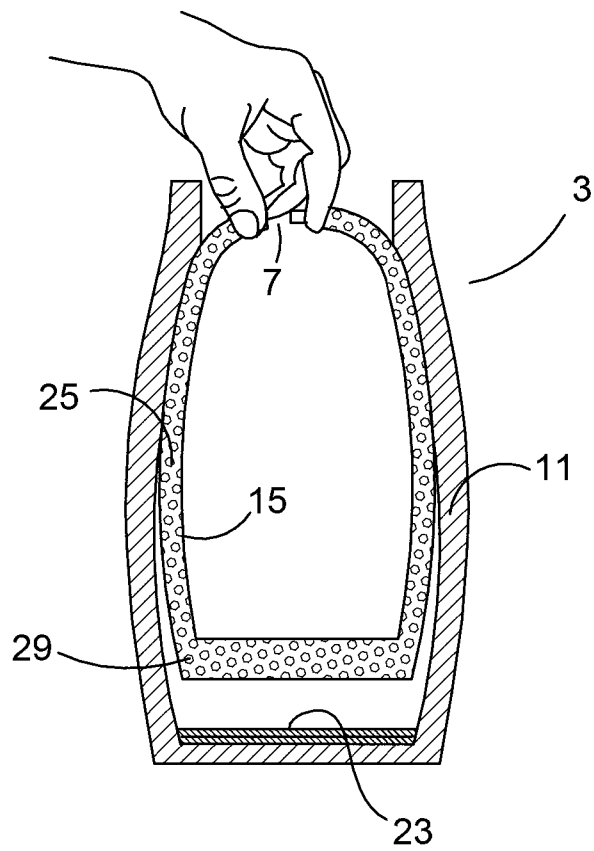


Figure 8

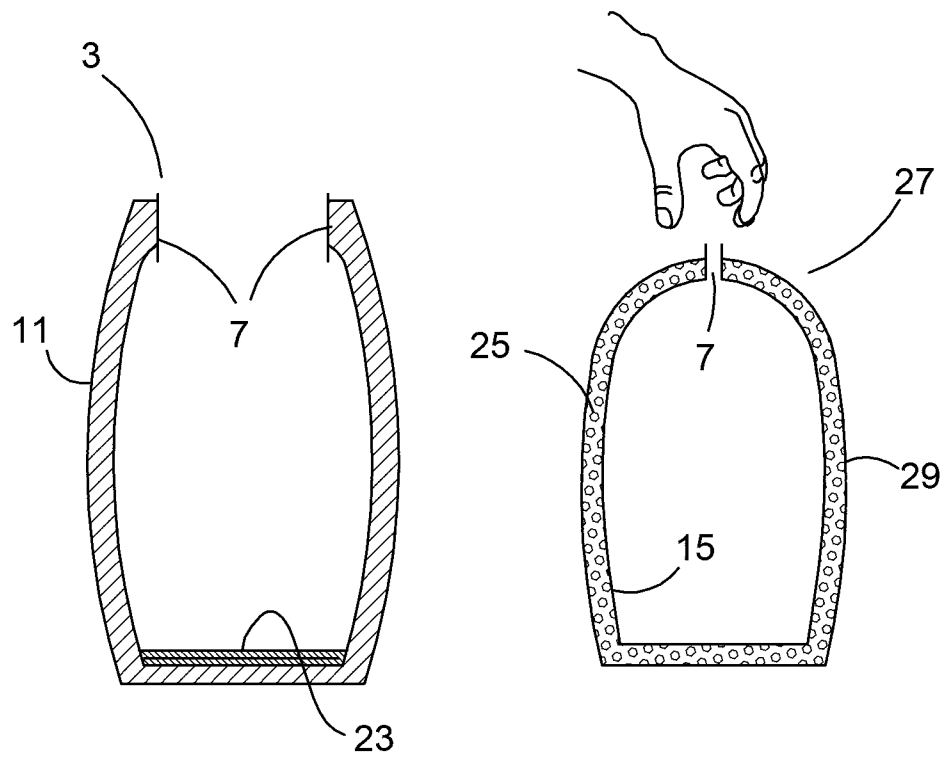


Figure 9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2016/000402

A. CLASSIFICATION OF SUBJECT MATTER

**A45C 3/04 (2006.01) A45C 3/06 (2006.01) A45C 11/20 (2006.01) A45C 13/02 (2006.01) B65D 81/38 (2006.01)
A47G 23/04 (2006.01)**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Databases: WPI, EPODOC, PATENW in Logical databases, IPC/CPC marks: A45C3/04, A45C3/06, A45C11/20, A45C13/02, B65D81/38, A47G23/04 and keywords: bag, hand carry, cool, warm, heat, temperature, cold, freezing, frozen or chill, refrigerator, layer, wall, side wall, wine, insulating, foam, sealing and similar terms.

Applicant(s)/Inventor(s) name searched in internal databases provided by IP Australia.

Applicant(s)/Inventor(s) name search in Espacenet, AusPat, Google Patents/Google scholar: Applicant name/Inventor name: CARROLL, Suzanne Joan and Keywords: bag, tote, freezing, cooling, gel pack, heat pack, insulator, foam, side walls, wine, drink and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	



Further documents are listed in the continuation of Box C



See patent family annex

* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 22 February 2017		Date of mailing of the international search report 22 February 2017	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustalia.gov.au		Authorised officer Jayati Ray AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262223654	

INTERNATIONAL SEARCH REPORT		International application No.
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		PCT/AU2016/000402
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	AU 2008100337 A4 (Kerry Reid Creations Pty Ltd) 15 May 2008 Fig. 1 and the associated text,	1-2
X	US 2012/0255971 A1 (GRIFFITH) 11 October 2012 Figs. 1, 2, 6 and the associated text	1-3, 5-9
X	US 2010/0270317 A1 (KIELING ET AL.) 28 October 2010 Figs. 1, 8, 9 and the associated text	1-2, 4, 10-12
A	Drinks bag company, published on 10 March 2014, Viewed on internet on 14 February 2017: URL: https://www.youtube.com/watch?v=C_fjbg-lqeE whole video	1-12
A	US 2004/0065703 A1 (BELLUCCI) 08 April 2004 Figs. 1-3 and the associated text	5-9

INTERNATIONAL SEARCH REPORT Information on patent family members		International application No. PCT/AU2016/000402	
This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.			
Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
AU 2008100337 A4	15 May 2008		
US 2012/0255971 A1	11 October 2012	US 2012255971 A1	11 Oct 2012
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		WO 2010124214 A2	28 Oct 2010
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End of Annex			
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. Form PCT/ISA/210 (Family Annex)(July 2009)			