



US 20080245312A1

(19) **United States**

(12) **Patent Application Publication**

**Leung et al.**

(10) **Pub. No.: US 2008/0245312 A1**

(43) **Pub. Date: Oct. 9, 2008**

(54) **PET CARRIER WITH REVERSIBLY EXPANDABLE/COLLAPSIBLE SECTIONS**

**Publication Classification**

(51) **Int. Cl.**  
*B65D 85/50* (2006.01)

(76) Inventors: **Michael Leung**, Pomona, CA (US);  
**Greg Mote**, Los Angeles, CA (US)

(52) **U.S. Cl.** ..... 119/497

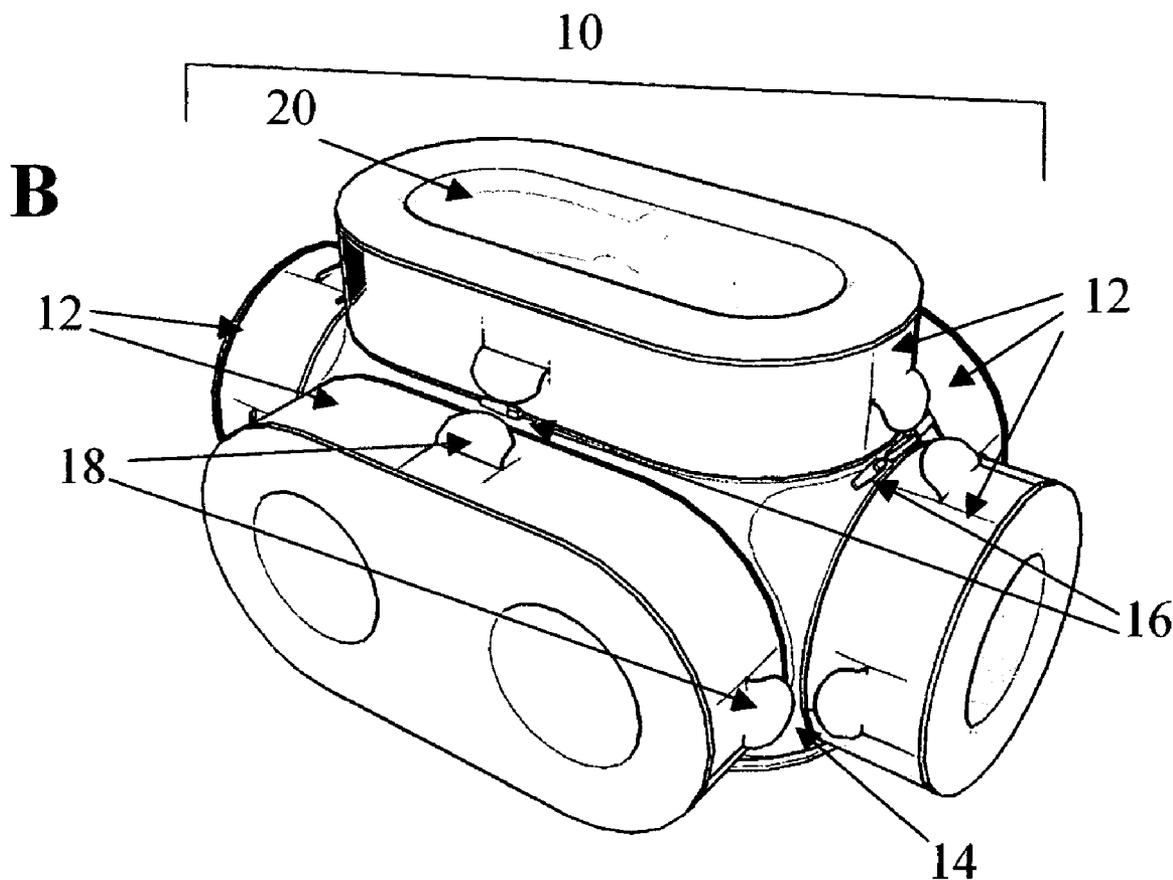
(57) **ABSTRACT**

Correspondence Address:  
**DAVID J. WILSON**  
**61 BELCHER CIRCLE**  
**MILTON, MA 02186 (US)**

The invention relates generally to a device designed for the comfort of a pet or other small animal during travel. More specifically, the present invention relates to a device that can function a pet carrier designed and sized for travel on a public or private transportation vehicle that comprises one or more reversibly expandable and collapsible sections that, when expanded, increase the interior space of the pet carrier and, when collapsed, are substantially flush with the sides or top of the carrier to which they are attached.

(21) Appl. No.: 11/732,347

(22) Filed: Apr. 3, 2007



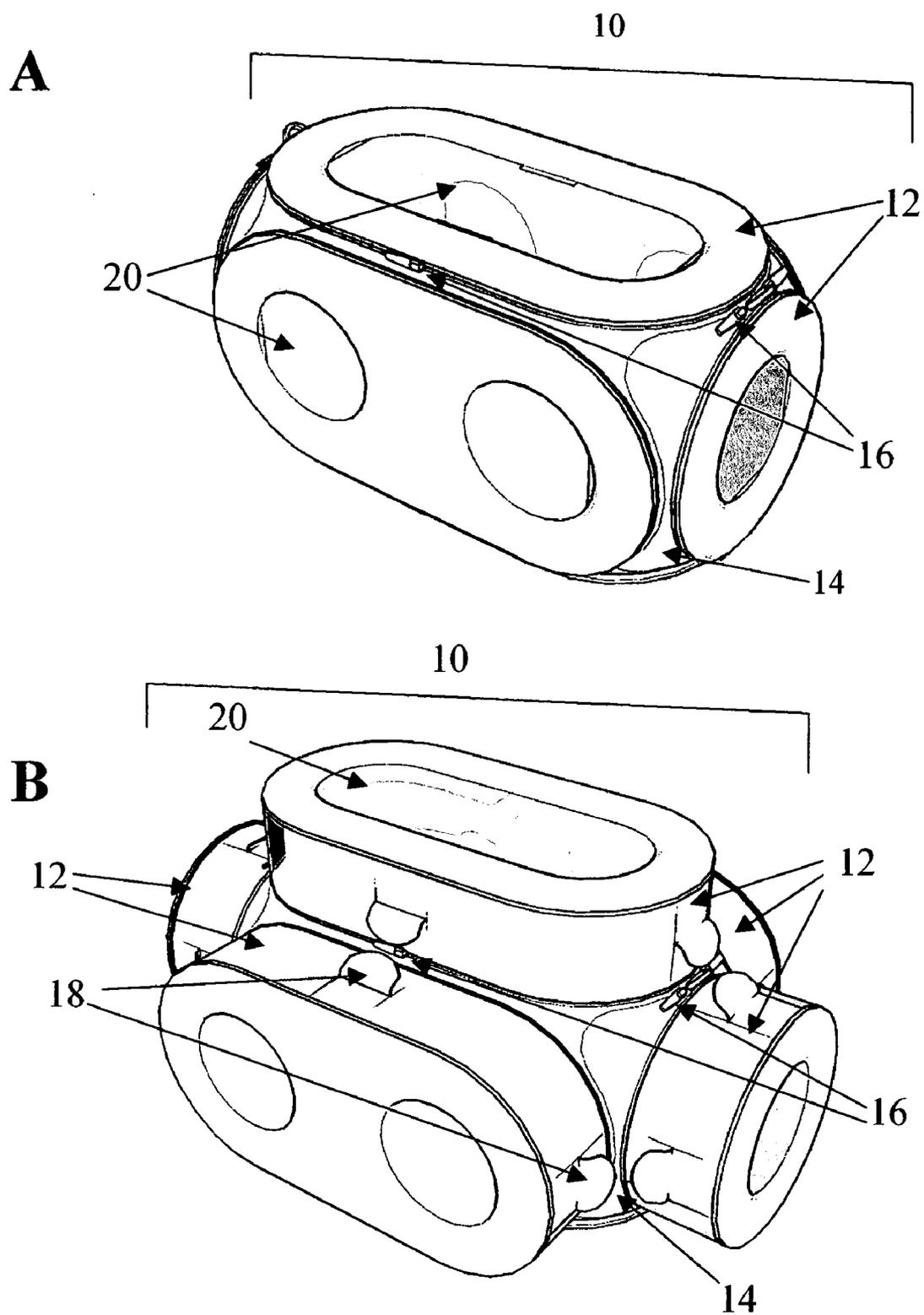
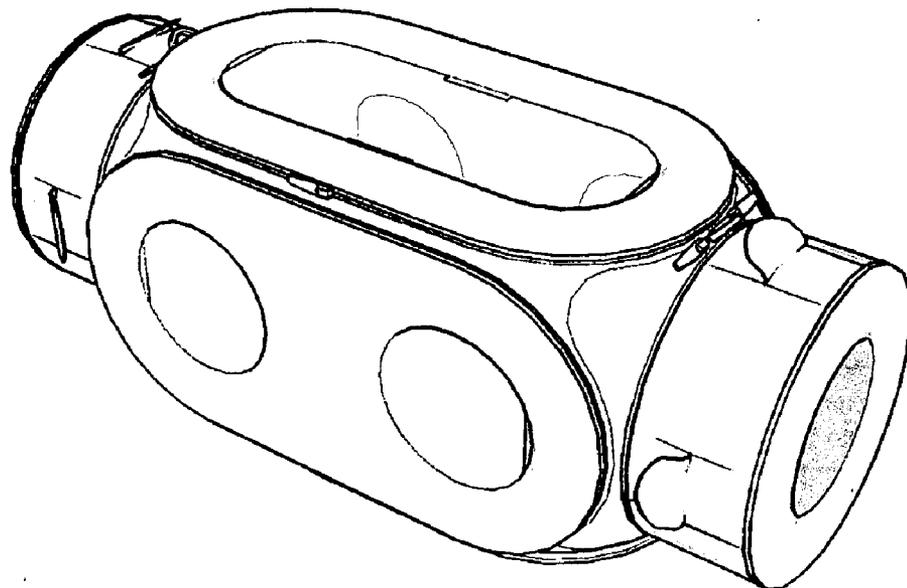


Figure 1

**A**



**B**

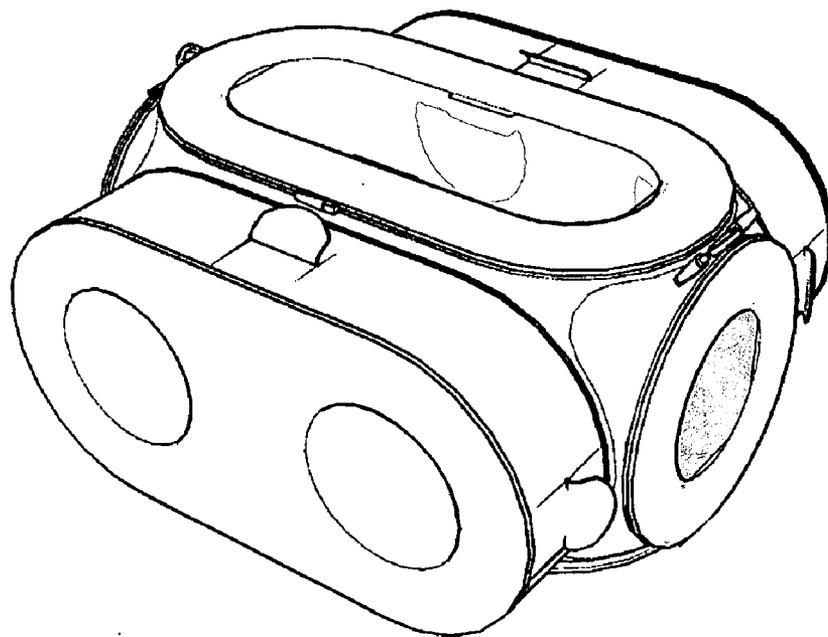


Figure 2

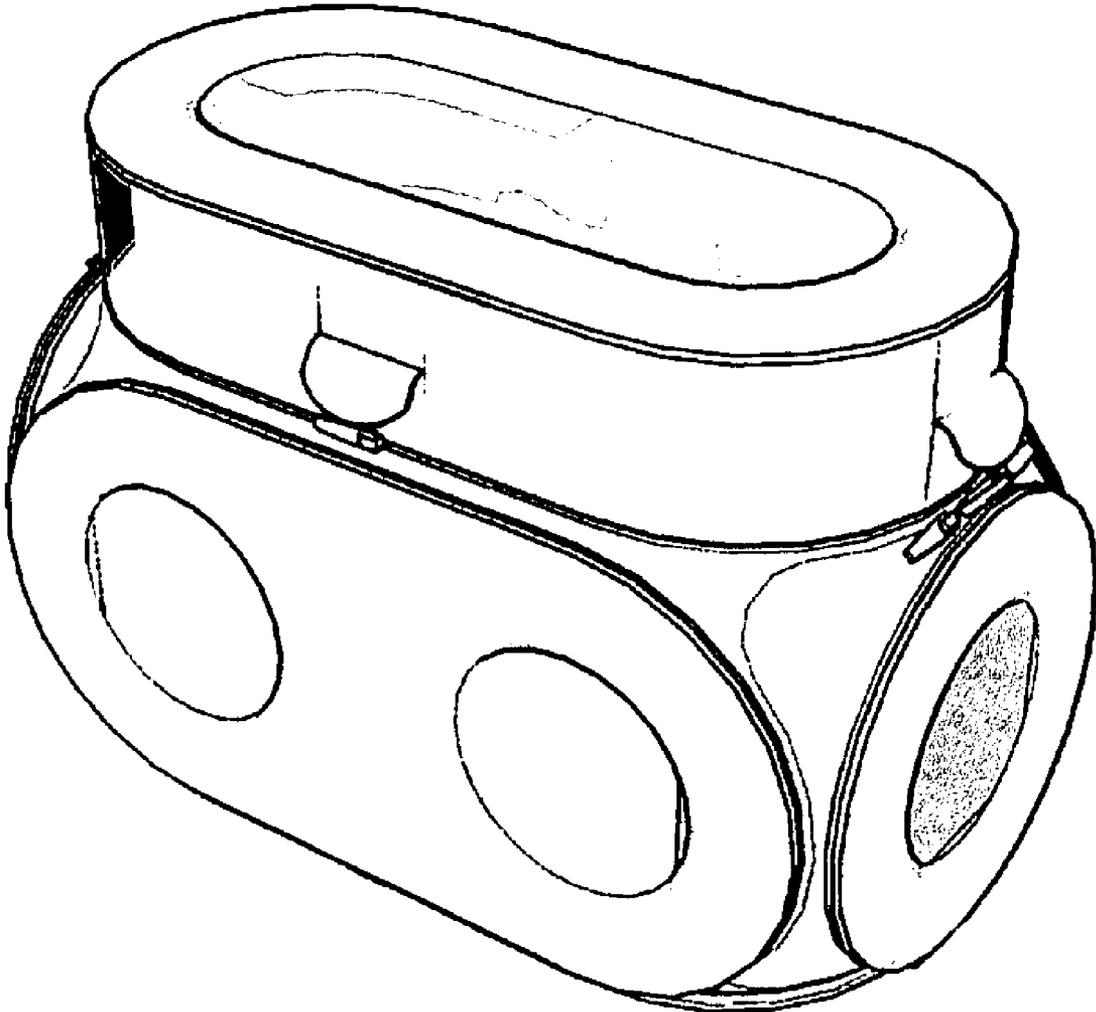
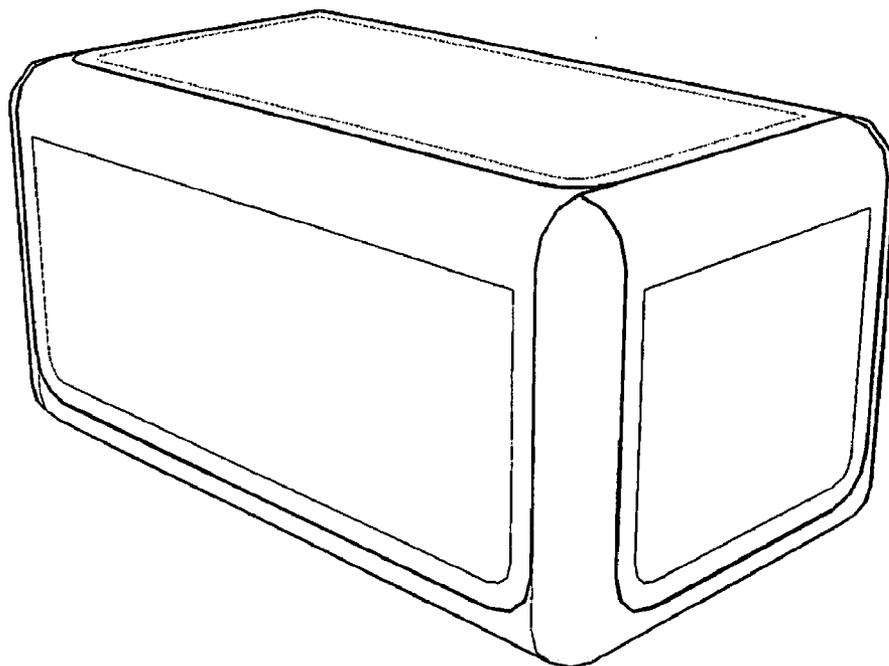


Figure 3

**A**



**B**

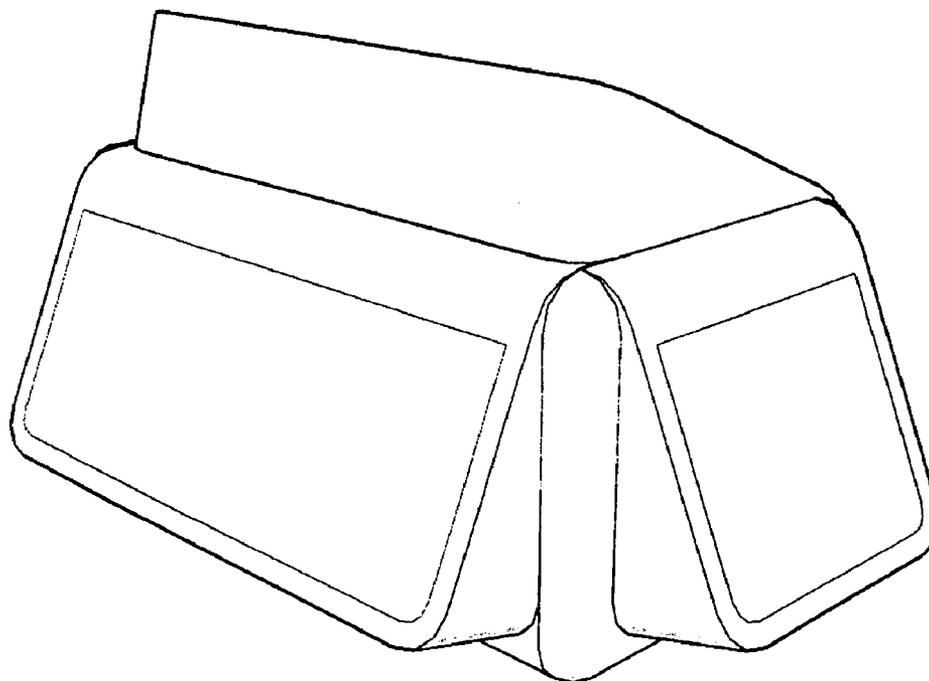
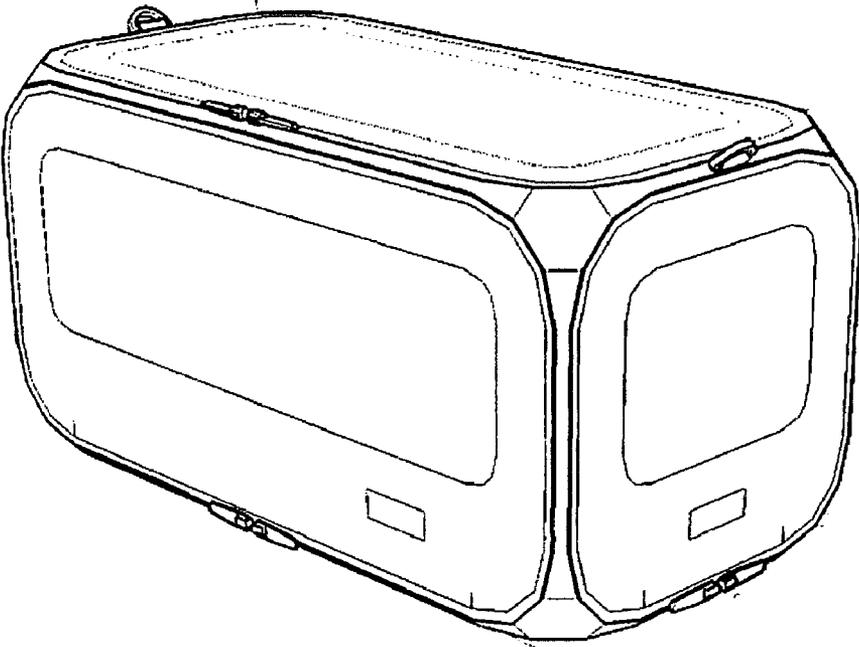


Figure 4

**A**



**B**

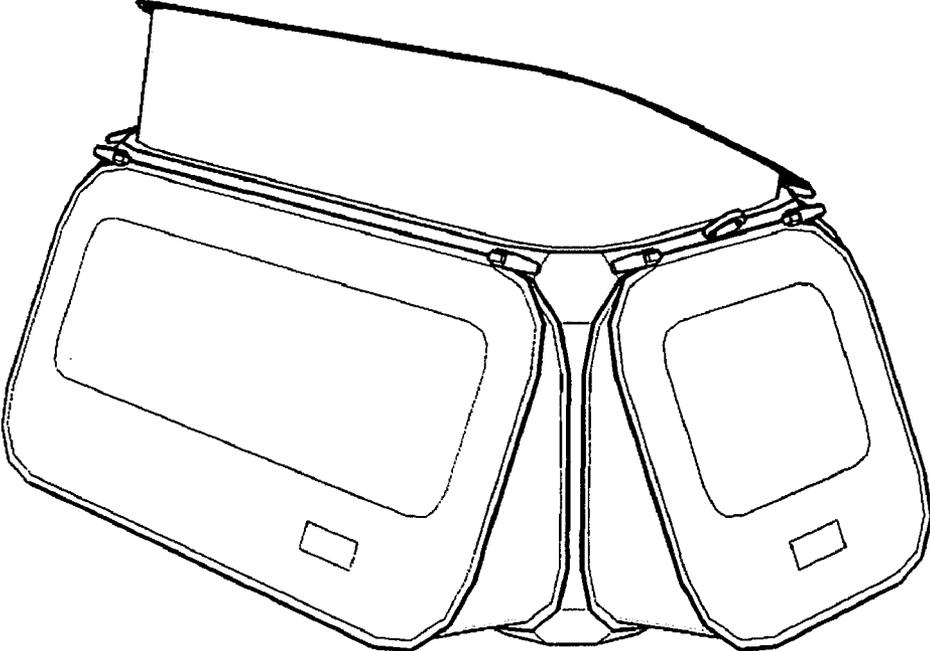
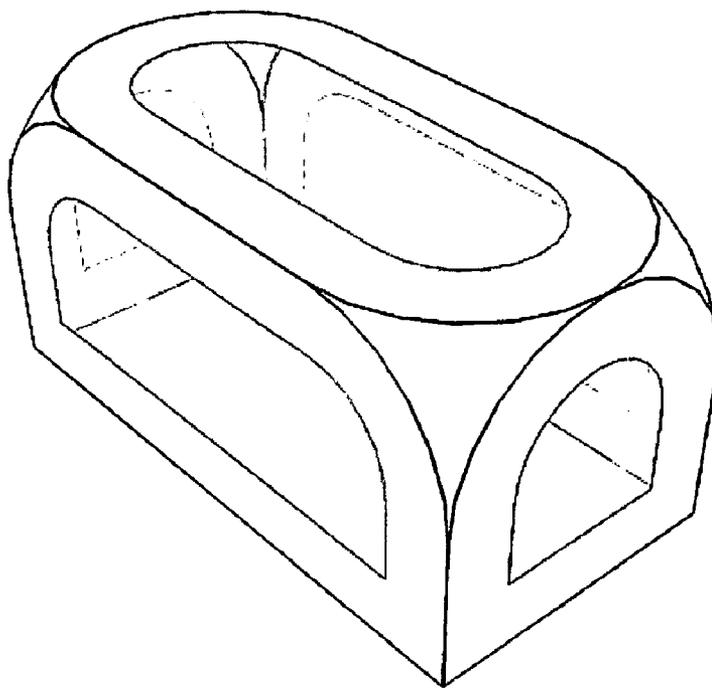


Figure 5

A



B

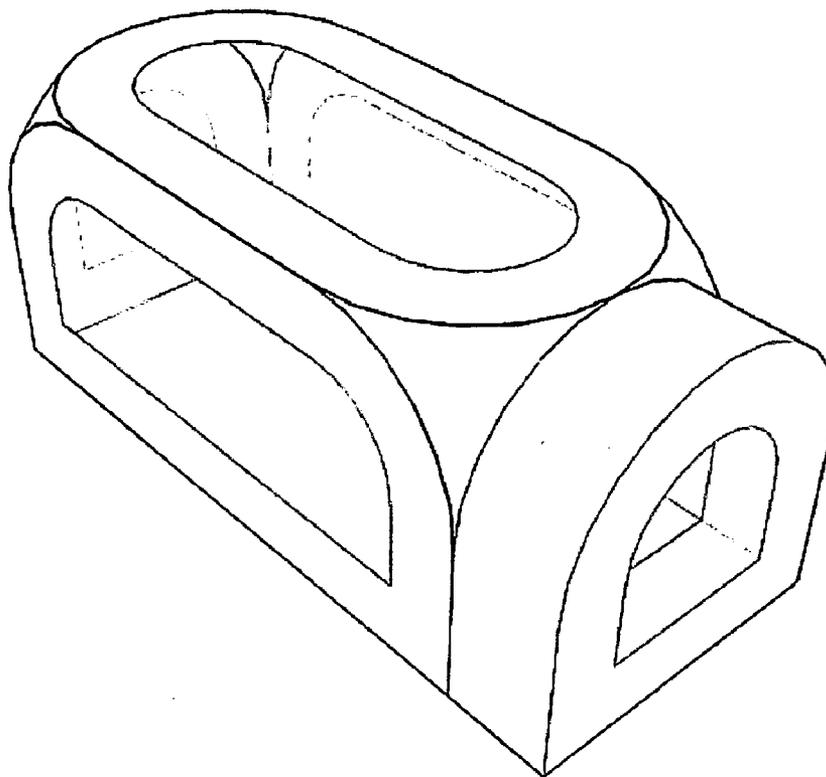
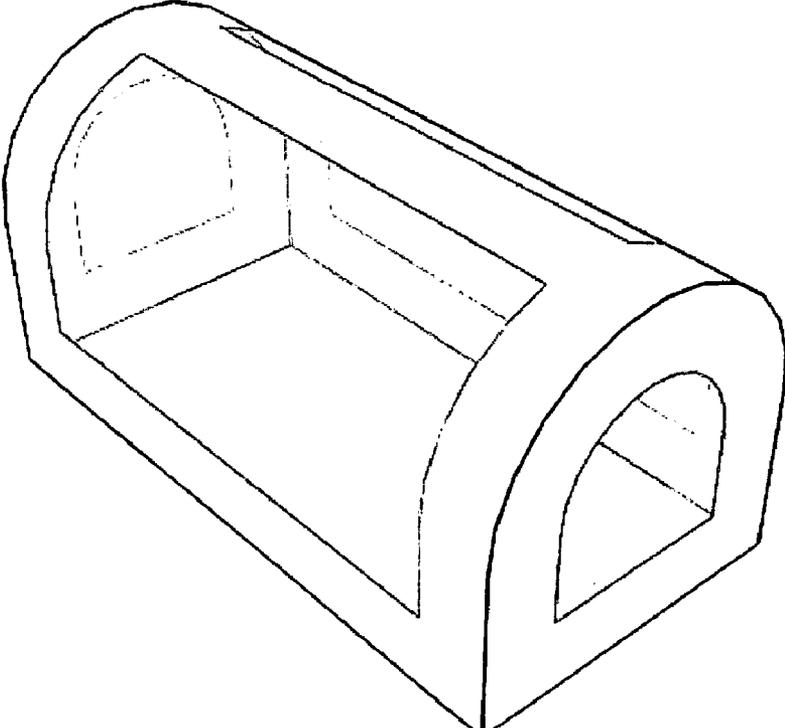


Figure 6

A



B

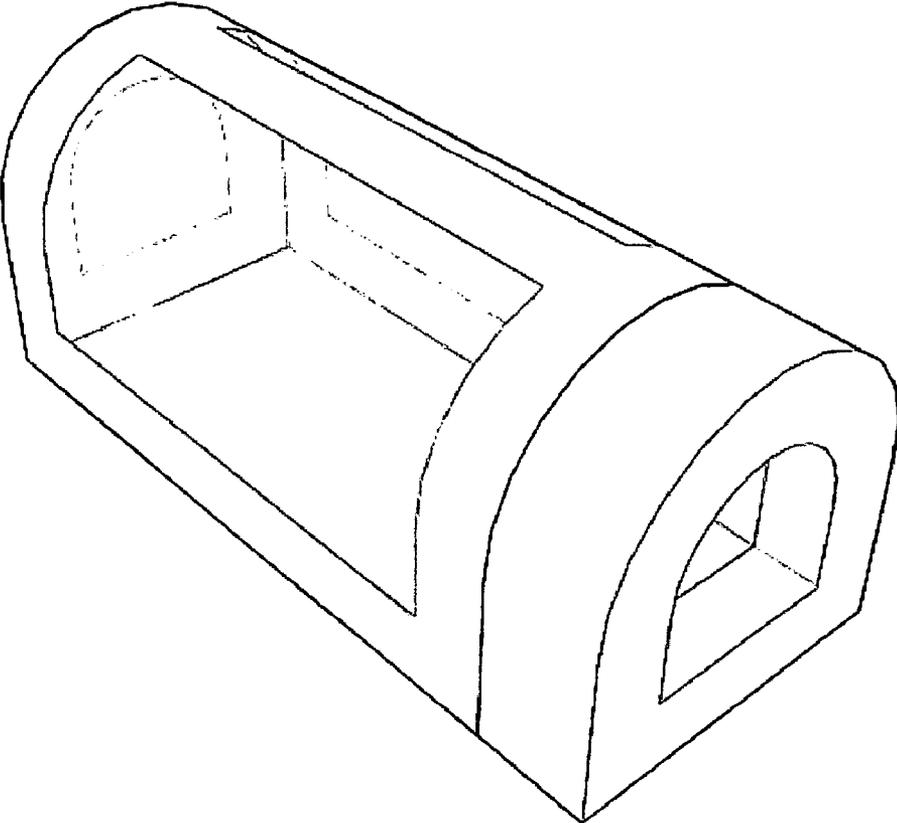


Figure 7

**PET CARRIER WITH REVERSIBLY EXPANDABLE/COLLAPSIBLE SECTIONS**

**FIELD OF THE INVENTION**

**[0001]** The invention relates generally to a device designed for the comfort of a pet or other small animal during travel.

**BACKGROUND OF INVENTION**

**[0002]** Generally, people want to make their pets or animal companions as comfortable as reasonably possible during travel. Additionally, most companies that provide public modes of transportation services (such as airline, bus line or train) require that an animal be restrained in a carrier that can fit into a designated space or area on the vehicle. Private automobiles also often have limited space for pet carriers. In this regard, pet owners place their pets into small carriers that offer little or no room for the animal to move freely or be comfortable, especially when on long trips.

**[0003]** Prior art carriers have not addressed this problem. Most prior art carriers designed for air or bus travel, for example, are sized to fit into the allotted space for the carrier. For example, most airlines require the pet carrier to fit into the space under the seat directly in front of the human traveler and the carrier must be located there, for example, during take off and landing. At other times the carrier may be removed from the designated storage area. However, the animal is not usually allowed to leave the carrier. Thus, the animal must often remain in the cramped carrier for the entire length of the trip. Some prior art carriers are collapsible to take up less room during storage of the carriers when not in use. (See, for example, U.S. Pat. No. 6,131,534 to Axelrod, U.S. Pat. No. 6,899,057 to Chrisco and U.S. Pat. No. 6,345,591 to Richmond). Others have top sections that can be raised or lowered to provide a little more interior room for the animal when the carrier is not placed into the designated travel storage area. (See, for example, U.S. Pat. No. 6,302,061 to Weatherby).

**[0004]** Still, other prior art carriers on the market resemble a backpack with front and back portions that can be folded outwards to expand the interior space. (see, e.g., <http://www.dog-bag.co.uk/mpintro.html>). These carriers, however, only have one resizable compartment with limited expansion capacities and are too small, even when in the expanded configuration, to provide enough space for the animal to be comfortable for any length of time. Additionally, the bottom portion of this prior art carrier has the generally curved shape which would not be comfortable for an animal for any length of time.

**[0005]** Yet another pet item on the market is an expandable tube comprising one resizable compartment designed for containing an animal in a car (see, e.g., <http://www.dogbag.it/>). This product is not designed for nor sturdy enough for carrying an animal and, because of the curved bottom portion, would be uncomfortable for animals contained in it for any length of time.

**[0006]** Additionally, these types of prior art carriers have only limited expansion capabilities. Therefore, what is needed is a device for containing an animal during travel that allows the animal greater interior room when the carrier is removed from the designated travel storage area.

**SUMMARY OF INVENTION**

**[0007]** In one aspect, the invention relates to a device that can function as a pet carrier that comprises one or more

reversibly expandable and collapsible sections that, when expanded (e.g., extended), increase the interior space of the pet carrier and, when collapsed, are substantially flush with the sides or top of the carrier to which they are attached. The carrier is also designed so that the animal may be comfortable for extended periods of time, for example, while in transit. For example, the carrier may also comprises cushions, pads and/or padding, blankets, removable and washable liners, heaters, etc. In the context of the present invention, the term “substantially flush” is defined as meaning that the secondary compartment, when in the collapsed configuration, does not protrude from the respective panel of the main compartment more than about four times to about six the thickness of the end panel of the secondary compartment. In another embodiment the secondary compartment, when in the collapsed configuration, does not protrude from the respective panel of the main compartment more than about two times the thickness of the end panel of the secondary compartment. The term “substantially co-planar” shall be defined as being synonymous with the term “substantially flush.” In another embodiment, the carrier also comprises a port or door for entry and egress of the animal. In yet embodiment aspect, the carrier also comprises a hand strap or other carrying means. Non-limiting examples of suitable carrying means are handles and straps (e.g., hand straps, shoulder straps and backpack straps) or a combination thereof.

**[0008]** The term “panel” in the present invention shall be defined as something that is essentially planar, flat or level. A panel of the present invention need not, however, be a continuous plane. It may, for example, have portions removed where, for example, a secondary compartment or exit/entry port would be located.

**[0009]** In one embodiment, the pet carrier of the present invention comprises a frame. The frame of the present invention may comprise rigid or semi-rigid panels for the top, bottom and four sides of the carrier. In one embodiment, the frame and/or panels of the pet carrier of the present invention may be made from one or more of plastic, metal, paperboard, wood or hardened rubber. In yet another embodiment, the frame of the carrier comprises a molded box with said box having cutouts, etc. for expandable secondary compartments, doors, etc. to interface with the carrier. In another embodiment, the panels are covered, for example, with a fabric or other flexible covering. In these embodiments, the covering may also function in securing the panels to each other. When assembled, in one embodiment, the carrier resembles, generally, a rectangular box or prism. The term, “generally rectangular or square box or prism,” in the context of the present invention, means that the carrier need not be a perfectly rectangular or square box or prism. In one embodiment, for example, the carrier may have rounded corners or rounded edges. In another embodiment, the panels of the pet carrier are rigid or semi-rigid. In another embodiment, the top and bottom panels of the carrier are essentially parallel to each other. In yet another embodiment, the top and bottom panels are essentially perpendicular to the side panels (i.e., they meet the side panels and/or attach to the side panels at essentially right angles). In still yet another embodiment, the bottom panel of the pet carrier of the present invention is rigid or semi-rigid to provide support for the animal while being carried.

**[0010]** In another embodiment, the frame of the carrier may comprise ridged, semi-rigid or semi-flexible rods or tubes having, when assembled, the general shape of the carrier or of the individual compartments. In this embodiment, the rods or

tubes of the frame would be located at the junctions where, for example, the panels of the sides, top and bottom joined one another. Also in this embodiment the panels would be made of a flexible or semi-flexible material. In yet another embodiment, the panels may be made of a rigid or semi-rigid material. In one embodiment, the frame and/or panels of the pet carrier of the present invention may be made from one or more of plastic, metal, paperboard, wood or hardened rubber.

**[0011]** In the context of the present invention, the term “rigid” will be defined as being stiff and non-pliable while the terms “essentially rigid” or “semi-rigid” are defined as being stiff but capable of slight bending or having flexibility (e.g., molded plastic). In the context of the present invention, the term “essentially rigid” or “semi-rigid” is also defined as being self-standing while also being pliable and/or compressible (e.g., high density foam or other foams and foam-like materials meeting this definition). The terms “flexible” and “semi-flexible” shall be defined as having greater pliability or flexibility than material that is “semi-rigid.” In one embodiment, the term “flexible” shall be defined as a material that is collapsible and/or foldable.

**[0012]** The present invention is not limited by the shape of the carrier. For example, in one embodiment, as described above, the carrier is generally rectangular. This is the preferred embodiment because it gives the greatest interior space when the reversibly expandable/collapsible sections are in the collapsed configuration. However, other shapes are contemplated for the carrier of the present invention. For example, in another embodiment, the carrier may be shaped with two of the sides and the top being continuous thereby creating a carrier with an arched or arc shaped top that when observed from the end it would have the shape of the letter “D” resting on the flat side of the “D.” Other shapes for the carrier of the present invention will be apparent to those skilled in the art. Several non-limiting embodiments of alternative shapes contemplated for the present invention are presented in FIGS. 6 and 7.

**[0013]** In another embodiment, the pet carrier of the present invention may have more than four sides and may have, for example, between five and twelve sides. In this embodiment, the top and bottom panels will be shaped to conform to the shape of the carrier made from the side panels. For example, a pet carrier comprising five side panels may be pentagon shaped and, thus, the top and bottom panels would be pentagon shaped. The side panels of the present invention need not be the same width. For example, a hexagonal shaped pet carrier of the present invention may have one, two or more sides that are of a narrower or wider width than the other side panels of the pet carrier thereby creating, for example, an elongated hexagonal pet carrier.

**[0014]** The carrier of the present invention comprises one or more reversibly expandable and collapsible secondary sections. These secondary sections, when the carrier has two or more such sections, may be, but need not be, expanded and collapsed independently of each other.

**[0015]** In one embodiment, the secondary sections comprise an end panel connected to the main compartment of the carrier by flexible material such as, for example, fabric or flexible screening. The secondary sections of the carrier also may comprise a frame. In one embodiment, the frame is located in the end panel of the secondary section. The frame may comprise, for example, a rigid or semi-rigid panel covered with a flexible material such as fabric or screening. The frame may also comprise a rigid or semi-rigid tube or rod

located at, for example, the junction where the flexible material connects the end panel to the main compartment of the carrier. In one embodiment the frame would have the general shape of the secondary compartment when viewed end on. In one embodiment, the frame and/or panels of the pet carrier of the present invention may be made from, for example, one or more of plastic, metal, paperboard, wood or hardened rubber.

**[0016]** In another embodiment, one or more of the secondary compartment(s) of the present invention may be hinged so that they fold out from the main compartment of the carrier while one edge of the secondary compartment remains attached to the main compartment. (See, for example, FIGS. 4 and 5). In this embodiment, the secondary compartment is attached at one edge to the main compartment and the opposite edge may be pulled out from the main compartment thereby creating a wedge-shaped compartment when viewed from one or more sides (see, e.g., FIGS. 4 and 5). Also, in this embodiment, the flexible material connecting the end panel of the secondary compartment to the main compartment is only associated with three sides or edges of the secondary compartment since a portion of the secondary compartment is fixedly connected to the main compartment.

**[0017]** The secondary compartments of the carrier of the present invention may be reversibly expanded and collapsed. When the secondary compartment(s) are in the collapsed configuration the carrier is designed to fit into the space allotted for stowing during, for example, take off and landing of an air plane. When removed from the storage area the secondary sections may be expanded to give the animal more interior room. The present invention is not limited to any particular mechanism for the expansion and collapsing of the secondary sections. In one embodiment, the secondary section is supported in the expanded configuration by the fabric that connects the end panel of the secondary compartment to the main compartment of the carrier of the present invention. In this embodiment, the fabric would need to be flexible enough to collapse upon itself in order to collapse the secondary section but rigid enough in order to support the secondary compartment in a generally erect configuration when the secondary compartment is expanded. Any stiff fabric such as, for example, a heavy canvas, would be suitable for this embodiment.

**[0018]** In another embodiment, the secondary compartment may be supported in the expanded configuration by a flexible frame located in or adjacent to the flexible material used to connect the end panel of the secondary compartment with the main compartment. One non-limiting example of this embodiment would be, for example, a spring that, when released from the collapsed configuration, would cause the secondary compartment to expand and would support the secondary compartment in a generally erect configuration.

**[0019]** Another non-limiting embodiment for supporting the secondary compartments of the carrier of the present invention is to have the end panel of the secondary compartment supported by a series of telescoping rings that are designed to slide into the next ring when the secondary compartment is collapsed (similar to the rings comprising a collapsible campers cup). The series of telescoping rings of the present embodiment may be covered with a flexible material such as fabric for aesthetics and protection of the rings. The flexible covering, if present, may be located on the exterior surface or interior surface of the rings or both.

**[0020]** Yet another embodiment contemplated by the present invention is to have one or more foldable supports or

arms that are attached to the frame (and/or panels) of the main compartment and the frame (and/or panels) of the secondary compartment. One skilled in the art could determine the number of foldable supports or arms that would be suitable for any particular design of the carrier of the present invention.

**[0021]** The secondary compartments of the pet carrier of the present invention, in one embodiment, may also be locked in the expanded configuration. The invention is not limited to any particular method of locking the secondary compartments in the expanded configuration. It is contemplated that the methods may include one or more of straps, hinged brackets, magnets (for example, using reverse polarity with a magnet located in the main compartment), buttons, snaps or zippers. Also, the secondary compartments may comprise tabs that may be grasped to aid the user in opening or expanding the secondary section.

**[0022]** There is no limit to the distance that the secondary compartments may extend from the main compartment when in the expanded configuration. In one embodiment, the secondary compartments extend no more than about 100% of the distance of the length (or width or height, depending on the point of attachment of the secondary compartment to the main compartment) of the main compartments. In a preferred embodiment, the secondary compartments extend no more than about 75%, 50%, 25% or 10% of the length of the main compartment.

**[0023]** In another embodiment, the end panel of the secondary compartment is no larger in diameter than the panel of the main compartment to which the secondary compartment is attached. The term "diameter," in the present invention, shall be defined as the length of a straight line that extends from one edge of an object or panel, through its center and to the opposite edge. Based on this definition, the diameter of a circle would be the same no matter where the straight line was drawn. In contrast, an oblong shape would have varying diameters depending upon where the straight line was drawn. In other words, in a preferred embodiment of the present invention, the end panel of the secondary compartment would not cover a larger area than the side or top panel of the main compartment to which it attaches.

**[0024]** There is no limitation to the size of the main compartment as long as the main compartment is sized to fit into the space allotted by the commercial transportation carrier when all of the secondary compartments are in the collapsed configuration. In another embodiment, the main compartment measures no more than about 40 inches in length, 30 inches in width and 30 inches in depth. In another embodiment, the main compartment measures no more than about 20 inches in length, 15 inches in width and 15 inches in depth. In a preferred embodiment, the main compartment measures about 17½ inches in length, 9½ inches in width and 9½ inches in depth.

**[0025]** The secondary compartments (as well as the panels of the main compartment that may not have expandable/collapsible secondary sections attached) of the present invention may also comprise one or more windows. The windows may be made from a mesh material (such as screening), a transparent material (such as vinyl) or a translucent material (such as colored or smoked vinyl). The windows of the present carrier may be located on the end panel or be part of the flexible material that attaches the end panel to the main compartment. In one embodiment, the flexible material that

attaches the end panel to the main compartment is made of one or more of mesh materials, transparent materials or translucent materials.

**[0026]** The pet carrier of the present invention comprises a door or entry/exit port large enough for putting the animal into and removing the animal from the carrier. The door, doorway, entry/exit port or opening of the pet carrier of the present invention is not limited to any particular type of door, doorway, entry/exit port or opening. The pet carrier of the present invention is not limited by the type, position or size of door present so long as the door permits the egress and ingress of the pet. In one embodiment, the door or entry/exit port of the carrier comprises one of the secondary compartments wherein said secondary compartment can be removed or partly removed. For example, in one embodiment, a secondary compartment may be connected to the main compartment with a zipper that, when unzipped, would permit the removal of the secondary compartment. In another embodiment, the zipper connecting the secondary compartment to the main compartment may be only unzipped enough to permit the opening of the secondary compartment like a door. Still, in another embodiment, the secondary compartment may be secured with, for example, one or more zippers, buttons, snaps, hook and loop fastener, hooks, buckles, laces, buttons, magnets, straps, etc. In a preferred embodiment, the secondary compartment that functions as a door or entry/exit port is used as a door or entry/exit port when the secondary compartment is in the collapsed configuration. In another embodiment, the door or entry/exit port of the present invention is located on a side panel, top panel or bottom panel when the side, top or bottom panel does not function as a reversibly expandable/collapsible secondary compartment.

**[0027]** The secondary compartments of the carrier of the present invention may be secured when in the collapsed configuration so they do not expand when, for example it would be inconvenient or unnecessary. This may be of particular importance if the secondary compartments comprise a spring mechanism (see, above) to aid in the expansion of the secondary compartment. The present invention is not limited by the means or method used to secure the secondary compartments when in the collapsed configuration. In one embodiment, the means or method of securing the secondary compartments when in the collapsed configuration comprises (for each secondary section), for example, one or more zippers, snaps, buttons, hooks, buckles, laces, straps, buttons, magnets, hook and loop type fasteners, etc.

**[0028]** For the purposes of this invention, the terms "pet" and "animal" shall be interchangeable and shall refer to any animal that is used with the present invention.

**[0029]** The pet carrier of the present invention may also comprise wheels. This may be helpful for transporting animals in the pet carriers of the present invention. The wheels may be attached to the bottom of the pet carrier and may be recessed or partly recessed. In one embodiment, the wheels may be permanently attached to the carrier. In another embodiment, the wheels may be attached to a base unit wherein the pet carrier of the present invention may be placed for transport. In this regard, the base unit would function as a wheeled carrier for the pet carrier of the present invention not unlike a carrier for moving, for example, trash barrels. The wheels of the pet carrier may be locking or non-locking. The base unit may have a means of attachment to the pet carrier of the present invention but need not have such means of attachment.

**[0030]** In order to facilitate the movement of the various embodiments of the pet carrier of the present invention comprising wheels, the pet carrier may also comprise a pull handle. Such pull handle may attach to the pet carrier of the present invention at the carrier or the base unit (if present) or a combination thereof. The pull handle may be flexible (for example, made of a fabric material) or rigid (for example, made of a hard plastic or metal). The flexible pull handle may also retract into the pet carrier or base unit. The rigid pull handle may also be telescopic.

**[0031]** In one embodiment, the mobile pet bed is a pet bed comprises, optionally, a liner. The liner may be padded. In one embodiment, the liner is removable and/or washable, absorbent and disposable. In another embodiment, the pet carrier of the present invention comprises a heating means (for example, a heater or heating pad). The heating means of the present invention may be powered by battery, rechargeable battery or by directly plugging it into a wall socket, or a combination thereof. The heating pad may, for example, be powered by a UL approved power adapter for, e.g., home and auto use.

**[0032]** The present invention also contemplates that the pet carrier of the present invention embodies different non-limiting variations and options. For example, the pet carrier may be designed so that it can be stacked. This embodiment may be useful for owners of multiple pets, pet shops or business that frequently engage in the transportation of pets and other animals or just for storage. In another embodiment, the pet carrier of the present invention comprises one or more seat belt loops or other means for the attachment of a seat belt such as those found in cars and planes. In yet another embodiment, the carrier comprises a non-slip base made of, for example, rubber or a rubber-like material. In another embodiment the pet carrier is made from a one-piece molded (uni-molded, see, below) shell (foam, plastic, etc) in which a liner, for example, may be placed. In yet another embodiment, the pet carrier comprises attachable play sets (such as might entertain a kitten or puppy).

**[0033]** In yet other embodiments, the pet carrier of the present invention may comprise, for example, a plastic shell or frame (e.g., high-density plastic) coupled with foam bedding and/or a liner. The liner may be leak-proof or leak-resistant. The plastic shell may be "rigid" or "essentially rigid" as defined elsewhere in this specification. The plastic shell of the pet carrier may be made of a single uni-molded piece of plastic or of two or more separate pieces glued or otherwise attached to each other (e.g., they may be attached to each other with fabric covers sewed to each other) to form the carrier. The term "uni-mold" and "uni-molded" are defined herein as meaning an item (such as the pet carrier of the present invention) being molded in one piece instead of more two or more pieces that need to be assembled. Although the present invention is not limited to theory, the design of a hard plastic shell lined with a foam liner is thought to protect a pet while traveling. Fabric may cover both main compartment and the secondary compartment(s) of the pet carrier of the present invention. Fabric may be attached to or adhered to the shell of the main compartment and/or secondary compartment(s) by using adhesives, sewing, rivets, push plugs, etc. In another embodiment, the shell of the main compartment and/or secondary compartment(s) pet carrier are inserted into a fabric covering and sealed closed by glue, buttons, sewing, zippers, etc. Although the present invention is not limited to any particular choice in fabric, 1680D ballistic nylon is pre-

ferred for both the main and secondary compartment(s) for its durable properties and high tech appearance. Other features and advantages of the invention will be apparent from the following description and are incorporated herein as embodiments of the present invention.

#### BRIEF DESCRIPTION OF DRAWINGS

**[0034]** FIG. 1(A & B) shows (A) one embodiment of the pet carrier with reversibly expandable and collapsible sections with all of the secondary compartments in the collapsed configuration; (B) one embodiment of the pet carrier with reversibly expandable and collapsible sections with all of the secondary compartments in the expanded configuration. Also visible in both FIGS. 1(A) and 1(B) are windows located in the end panels of the top and side secondary compartments.

**[0035]** FIG. 2(A-B) shows (A) one embodiment of the pet carrier with reversibly expandable and collapsible sections with the two small side secondary compartments in the expanded configuration and (B) one embodiment of the pet carrier with reversibly expandable and collapsible sections with the two large secondary compartments in the expanded configuration.

**[0036]** FIG. 3 shows one embodiment of the pet carrier with reversibly expandable and collapsible sections with the top secondary compartment in the expanded configuration.

**[0037]** FIG. 4(A & B) shows an alternative embodiment of the pet carrier with reversibly expandable and collapsible sections. FIG. 4(A) shows the carrier with all secondary compartments in the collapsed configuration and FIG. 4(B) shows the carrier with all secondary compartments in the expanded configuration.

**[0038]** FIG. 5(A & B) shows an alternative embodiment of the pet carrier with reversibly expandable and collapsible sections. FIG. 5(A) shows the carrier with all secondary compartments in the collapsed configuration and FIG. 5(B) shows the carrier with all secondary compartments in the expanded configuration.

**[0039]** FIG. 6(A & B) shows an alternative embodiment of the pet carrier of the present invention with reversibly expandable and collapsible sections. FIG. 6(A) shows the carrier with all secondary compartments in the collapsed configuration and FIG. 6(B) shows the carrier with all secondary compartments in the expanded configuration. Although it is not shown in the figures, the pet carrier of this embodiment may also comprise secondary sections that expand from and collapse into the top and/or long sides of the carrier.

**[0040]** FIG. 7(A & B) shows an alternative embodiment of the pet carrier of the present invention with reversibly expandable and collapsible sections. FIG. 7(A) shows the carrier with all secondary compartments in the collapsed configuration and FIG. 7(B) shows the carrier with all secondary compartments in the expanded configuration. Although it is not shown in the figures, the pet carrier of this embodiment may also comprise secondary sections that expand from and collapse into the top and/or long sides of the carrier.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0041]** The invention will now be described in detail with reference to a few preferred embodiments, as illustrated in accompanying drawings. In the following description,

numerous specific details are set forth in order to provide a thorough understanding of the invention. However, it will be apparent to one skilled in the art that the invention may be practiced without some or all of these specific details. In other instances, well known features and/or process steps have not been described in detail in order to not unnecessarily obscure the invention. The features and advantages of the invention may be better understood with reference to the drawings and discussions that follow.

**[0042]** While the invention has been described with respect to a limited number of embodiments, those skilled in the art, having benefit of this disclosure, will appreciate that other embodiments can be devised which do not depart from the scope of the invention as disclosed herein. For clarity, if a number refers to several parts of the pictured pet carrier (for example, more than one window, zipper or tab may be present in a certain figure), not all of the parts may be labeled with that number (i.e., only one or a limited quantity of the total number of parts to which that number refers may be labeled either in the same or other figures). It is believed that one skilled in the art is able to identify the parts referred to based on the exemplifications given.

**[0043]** Referring now to FIG. 1A, one embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments (10) is shown with all secondary compartments (12) in the collapsed configuration on the main compartment (14). Also visible are zippers (16) which, in one embodiment, are used to secure the secondary compartments to the main compartment when the secondary compartments are in the collapsed configuration. Also visible are windows (20) located in the end panels of the secondary compartments.

**[0044]** Referring now to FIG. 1B, one embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments (10) is shown with all secondary compartments (12) in the expanded configuration on the main compartment (14). Also visible are zippers (16) and tabs (18) which, in one embodiment, are used to aid in expanding the collapsed secondary compartments. Also visible are windows (20) located in the end panels of the secondary compartments. In another embodiment, the windows may comprise a mesh or screen-like material used for attaching the end panels to the main compartment. The windows of the present invention may be any size up to the size of the end panel of the secondary compartment.

**[0045]** Referring now to FIG. 2A, this embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments is shown with the two smaller end side secondary compartments in the expanded configuration, the two larger side secondary compartments in the collapsed configuration and the top secondary compartment in the collapsed configuration.

**[0046]** Referring now to FIG. 2B, this embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments is shown with the two larger side secondary compartments in the expanded configuration, the two small end side secondary compartments in the collapsed configuration and the top secondary compartment in the collapsed configuration.

**[0047]** Referring now to FIG. 3, this embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments is shown with the

side secondary compartments in the collapsed configuration and the top secondary compartment in the expanded configuration.

**[0048]** Referring now to FIG. 4(A & B), an embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments is shown. FIG. 4(A) shows the pet carrier with all secondary compartments in the collapsed configuration. FIG. 4(B) shows the pet carrier with all secondary compartments in the expanded configuration.

**[0049]** Referring now to FIG. 5(A & B), an embodiment of the pet carrier of the present invention with reversibly expandable and collapsible secondary compartments is shown. FIG. 5(A) shows the pet carrier with all secondary compartments in the collapsed configuration. FIG. 5(B) shows the pet carrier with all secondary compartments in the expanded configuration.

**[0050]** Referring now to FIG. 6(A & B), an embodiment of the pet carrier of the present invention with "D"-shaped expandable/collapsible secondary compartments is shown. FIG. 6(A) shows the pet carrier with all secondary compartments in the collapsed configuration. FIG. 6(B) shows the pet carrier with one secondary compartment in the expanded configuration.

**[0051]** Referring now to FIG. 7(A & B), another embodiment of the pet carrier of the present invention with "D"-shaped expandable/collapsible secondary compartments is shown. FIG. 7(A) shows the pet carrier with all secondary compartments in the collapsed configuration. FIG. 7(B) shows the pet carrier with one secondary compartment in the expanded configuration.

What is claimed is:

1. A pet carrier comprising:

- a. a main compartment, said main compartment comprising opposed top panel and bottom panels and four side panels wherein said top, bottom and side panels are arranged to form a generally rectangular or square box (prism), an entry/exit port and a carrying means;
- b. one or more reversibly collapsible/expandable secondary compartment(s) wherein i) each of said secondary compartment(s) comprise an end panel and a perimeter of flexible material wherein said perimeter of flexible material attaches said end panel to said side or top panel of said main compartment, ii) wherein said secondary compartment is in open communication with said main compartment when in the expanded configuration and, iii) wherein said end panel of said secondary compartment is substantially flush with said side or top panel to which it is attached when in the collapsed configuration.

2. The pet carrier of claim 1, wherein the number of side panels number between five and twelve, the top and bottom panels are shaped conform with the number of side panels such that each side panel contacts the top and bottom panel along opposite edges of said side panels, thereby forming a main compartment comprising between five and twelve side panels and opposed top and bottom panels.

3. The pet carrier of claim 2, wherein the side panels are of one or more widths.

4. The pet carrier of claim 1, wherein said secondary compartment comprises a frame comprising an expandable spring located proximal to or within said perimeter of flexible material that attaches said end panel to said side or top of said main compartment.

5. The pet carrier of claim 1, wherein said secondary compartment comprises a frame comprising a rigid or semi-rigid ring, said ring positioned where said perimeter of flexible material is attached to said end panel.

6. The pet carrier of claim 1, wherein said end panel comprises a rigid or semi-rigid frame wherein said frame comprises one or more materials selected from a group consisting of plastic, metal, paperboard, wood or hardened rubber and said frame is covered with a flexible material.

7. The pet carrier of claim 1, wherein said carrying means comprises one or more of i) a shoulder strap, ii) a handle or iii) backpack straps.

8. The pet carrier of claim 1, wherein said entry/exit port comprises a hinged secondary compartment.

9. The pet carrier of claim 1, wherein said carrier comprises a rigid or semi-rigid frame, said frame comprises one or more materials selected from a group consisting of plastic, metal, paperboard, wood or hardened rubber and said frame is covered with a flexible material.

10. The pet carrier of claim 1, wherein said side compartments also comprise one or more windows.

11. The pet carrier of claim 10, wherein said windows are made from a material selected from a group consisting of a mesh material, a clear material or a translucent material.

12. The pet carrier of claim 1, wherein said carrier has a length of approximately 15 to 20 inches, a height of approximately 7 to 12 inches and a width of approximately 7 to 12 inches.

13. The pet carrier of claim 1, wherein said end panel of said secondary compartment has a diameter no larger than the panel of the main compartment to which the secondary compartment is attached.

14. The carrier of claim 1, wherein one edge of one or more of said secondary compartments remains attached to said main compartment when said secondary compartment is expanded from said main compartment.

15. A pet carrier comprising:

- a. a main compartment, said main compartment comprising i) an essentially flat bottom panel, ii) two D-shaped side panels wherein the straight side of the D-shaped side panels attach to opposite edges of said bottom panel, and iii) a top panel wherein the top panel attaches to opposite edges of the bottom panel and to the curved portion of the two D-panels, thereby creating a generally arch-shaped enclosure with an essentially flat bottom, iv) an entry/exit port and, v) a carrying means;
- b. one or more reversibly collapsible/expandable secondary compartments, wherein i) each of said secondary compartment(s) comprise an end panel and a perimeter of flexible material wherein said perimeter of flexible material attaches said end panel to said side or top panel of said main compartment, ii) wherein said secondary compartment is in open communication with said main compartment when in the expanded configuration and, iii) wherein said end panel of said secondary compart-

ment is substantially flush with said side or top panel to which it is attached when in the collapsed configuration.

16. The pet carrier of claim 15, wherein said secondary compartment comprises a frame comprising a rigid or semi-rigid ring, said ring positioned where said parameter of flexible material is attached to said end panel.

17. The pet carrier of claim 15, wherein said end panel comprises a rigid or semi-rigid frame wherein said frame comprises one or more materials selected from a group consisting of plastic, metal, paperboard, wood or hardened rubber and said frame covered with a flexible material.

18. The pet carrier of claim 15, wherein said carrier comprises a fabric cover.

19. The pet carrier of claim 15, wherein said carrier comprises a rigid or semi-rigid frame, said frame comprises one or more materials selected from a group consisting of plastic, metal, paperboard, wood or hardened rubber and said frame is covered with a flexible material.

20. The pet carrier of claim 15, wherein said side compartments also comprise one or more windows.

21. The pet carrier of claim 20, wherein said windows are made from a material selected from a group consisting of a mesh material, a clear material or a translucent material.

22. The pet carrier of claim 15, wherein said end panel of said secondary compartment has a diameter no larger than the panel of the main compartment to which the secondary compartment is attached.

23. A pet carrier designed and sized for travel on a public or private transportation vehicle, said pet carrier comprising:

- a. a main compartment, said main compartment comprising opposed top panel and bottom panels, which are essentially parallel to each other, and four side panels wherein said top, bottom and side panels are arranged to form a generally rectangular box (prism) and wherein the bottom panel is essentially rigid, an entry/exit port and a carrying means, and wherein said main compartment additionally comprises a frame and a fabric cover and, optionally, a removable, washable liner;
- b. one or more reversibly collapsible/expandable secondary compartments, wherein i) each of said secondary compartment(s) comprise an end panel and a perimeter of flexible material wherein said perimeter of flexible material attaches said end panel to said side or top panel of said main compartment, ii) wherein said secondary compartment is in open communication with said main compartment when in the expanded configuration and, iii) wherein said end panel of said secondary compartment is substantially flush with said side or top panel to which it is attached when in the collapsed configuration and iv) wherein one or more of said secondary compartments comprises a window made from one or more of a mesh material, a transparent material or a translucent material and v) wherein said secondary compartment comprises tabs to aid the user in the expansion of said secondary compartment.

\* \* \* \* \*