

COLLAPSIBLE PET CARRIER

TECHNICAL FIELD

[0001] The present invention relates generally to crates and cages for transporting small animals and, more specifically, to airline approved portable pet carriers for safely and securely carrying small dogs and cats within a passenger cabin of a commercial airplane.

BACKGROUND OF THE INVENTION

[0002] Numerous types of collapsible crates, cages, and other enclosures have been developed over the years for safely and securely transporting small dogs and cats. Exemplary in this regard are the known pet carrying devices disclosed in the following U.S. patents:

[0003] U.S. Patent No. 4,397,398 to Watanabe discloses a compact collapsible transport enclosure for small animals and other purposes that comprises a rigid plastic material with flexible creases along the rectangular dome-shaped upper portion. The enclosure can be collapsible upon the ridge bottom panel for storage.

[0004] U.S. Patent No. 6,216,637 to Burns et al. shows a foldable pet carrier for travelers. The panels are constructed with rigid luggage material and mesh, while attached to the bottom panel, and zippers on end panels, side panels and upper panel.

[0005] U.S. Patent No. 7,380,521 to Morton et al. discloses a collapsible pet crate that comprises a rigid inner framework within a soft-sided outer shell. The outer shell is formed of fabric and includes one or more mesh panels, whereas the rigid inner framework is preferably made of aluminum poles. Access is gained to the interior of the crate through one or more doors.

[0006] U.S. Patent No. 7,802,540 to Jakobowski et al. is directed to a foldable animal pet carrier for a pet that comprises an inner framework with unlocking hinges to fold up the frame into a single collapsible unit. The framework is surrounded by an outer fabric that may be separately foldable.

[0007] U.S. Patent No. 8,714,111 to Bryson is directed to a foldable animal carrier configured to be attached to a passenger seat of an automobile. The animal carrier comprises a rigid frame assembly, wheels and a belt path to accommodate a seat belt.

[0008] U.S. Patent No. 8,763,560 to Chang teaches a foldable and portable pet shelter. The pet shelter comprises a plurality of rigid reinforcing ribs.

[0009] Because each of these known devices has one or more shortcomings (especially in terms manufacturability and comfort for the pet), there is still a need in the art for new and improved collapsible pet carriers. The present invention fulfills this need and provides for further related advantages.

SUMMARY OF THE INVENTION

[0010] In brief, the present invention is directed to a collapsible pet carrier especially configured for carrying a small dog or cat. The inventive pet carrier is made of a durable, pliable, and flexible low-thread count weave material that, because of the spacings and gaps between the threads, allows for air flow and for the pet to see out in all directions (when the pet is within the pet carrier). In other words, the low-thread fabric material is breathable and largely see-through. In addition, and because the fabric is flexible and pliable, the pet carrier is able to bend and conform to the contours or shape of the pet such that the pet owner and can readily grasp and comfort and/or control the pet (when the pet is within the pet carrier).

[0011] A preferred fabric in accordance with the present invention consist of woven or knitted polymeric (*e.g.*, polyvinyl chloride coated polyester core) yarns of the type normally used for outdoor furniture. For example, a vinyl coated polyester yarn with a diameter of 0.018-0.025 inch, in a plain weave having a 24 x 12 thread count per square inch, and which contains approximately 73% vinyl compound and 27% polyester has been found to work particularly well. This fabric is typically woven from odd lots of yarns originally intended for outdoor furniture mesh fabrics and generally contains a wide assortment of different colors in the warp.

[0012] Unlike the collapsible pet carriers known in the art, the collapsible pet carrier of the present invention does not include or require any rigid support members (*i.e.*, is rigid support member free) needed to give the pet carrier its shape. Rather, the flexible and see-through low-thread weave material of the present invention has sufficient rigidity so as to allow the pet carrier to maintain its shape without the aid of any rigid support members (such as poles or other framing, for example). Because the pet carrier is free of

any rigid support members, it can be easily folded or rolled up for easy and convenient storage.

[0013] Thus, the collapsible pet carrier of the present invention includes at least an expanded position and a collapsed wound position and comprises: a central body positioned between two detachable end panels, wherein the central body is made from a rectangular shaped piece of fabric, and wherein each of the two end panels are made from triangular or round shaped pieces of fabric. The inventive pet carrier may be characterized in that when the pet carrier is in its expanded position the pet carrier has a tubular form, wherein the tubular form is defined by (i) positioning the opposite edges of the rectangular shaped piece of fabric of the central body adjacent to each other, and (ii) positioning each of the end panels at opposite ends of the tubular form so as to confront each other, and wherein when the pet carrier is in its collapsed wound position the pet carrier takes the form of a coiled roll, wherein the coiled roll is defined by winding the rectangular shaped piece of fabric of the central body together with the triangular or round shaped pieces of fabric of the end panels unto itself in a circular fashion. The rectangular shaped piece of fabric and the triangular or round shaped pieces of fabric are made of a pliable and flexible thread material, wherein the thread material has a multiplicity of gaps between the threads, and wherein the multiplicity of gaps between the threads are sized and configured to allow the transmission of visible light through the multiplicity of gaps in an amount sufficient for the small dog or cat to see outside the pet carrier when being carried within the pet carrier.

[0014] These and other aspects of the present invention will become more readily apparent to those possessing ordinary skill in the art when reference is made to the following detailed description in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The drawings are intended to be illustrative of certain preferred embodiments of the present invention. Like reference numerals have been used to designate like features throughout the several views of the drawings.

[0016] Figure 1 is a pictorial representation of a pet cat (named Olaf) positioned within and looking out of a collapsible pet carrier in accordance with an embodiment of the present invention, wherein the collapsible pet carrier is in its expanded position.

[0017] Figure 2 is an elevated side perspective view of the collapsible pet carrier (shown apart from Olaf) in accordance with an embodiment of the present invention, wherein the collapsible pet carrier is in its expanded position.

[0018] Figure 3 is an expanded view of a portion of the fabric of the collapsible pet carrier shown in Figure 2, wherein the fabric is made of a flexible weave or knit material that has a multiplicity of see-through gaps between the threads in accordance with an embodiment of the present invention.

[0019] Figure 4 is a side view of the collapsible pet carrier shown in Figure 2.

[0020] Figure 5 is an end view of the collapsible pet carrier shown in Figure 2.

[0021] Figure 6 is a top plan view of the collapsible pet carrier shown in Figure 2.

[0022] Figure 7a-b are elevated perspective views of the collapsible pet carrier in accordance with an embodiment of the present invention, wherein the collapsible pet carrier is in a collapsed partially wound position (Fig. 7a) and a collapsed fully wound position (Fig. 7b).

[0023] Figures 8a-e are a series of top plan views showing the collapsible pet carrier in (i) a collapsed fully unfolded position (Fig. 8a); (ii) in a collapsed partially folded position with the end panels folded onto the central body (Fig. 8b); (iii) in a collapsed partially folded position with the end panels folded onto the central body and the central body folded onto itself (Fig. 8c); (iv) in a collapsed partially folded position with the end panels folded onto the central body and the central body folded onto itself (Fig. 8d); and (v) in a collapsed fully folded position (Fig. 8e).

DETAILED DESCRIPTION OF THE INVENTION

[0024] In the following detailed description, reference is made to the accompanying drawings, which form a part hereof. In the drawings, similar symbols or markings typically identify like or corresponding elements, unless context dictates otherwise. The illustrative embodiments described in the detailed description, drawings, and claims are not meant to be limiting. Other embodiments may be utilized, and other changes may be made, without departing from the spirit or scope of the subject matter presented herein.

[0025] Thus, and in view of the foregoing and referring now to the Figures 1-8e, the present invention is directed to a collapsible pet carrier **10** for safely and securely carrying a small dog or cat (e.g., Olaf the cat), especially within the passenger cabin of a

commercial airplane. Unlike any of the collapsible pet carriers known in the art, the pet carrier **10** of the present invention can readily be configured into at least three different positions; namely, (1) a fully expanded position, (2) a collapsed wound position, and (3) a collapsed folded position – as more fully described herein.

[0026] As best shown in Figures 1 and 2, the collapsible pet carrier **10** of the present invention comprises a central body **12** positioned between two confronting detachable end panels **14, 16**. As best shown in Figure 6, the central body **12** is made from a rectangular shaped piece of fabric, whereas each of the two end panels **14, 16** are made from triangular or round shaped (e.g., flat bottom bulbous or tear drop shaped) pieces of fabric. As shown, the two end panels **14, 16** are detachably connected to the central body **12** by way of first **18a,b** and second zippers **20a,b**. The two end panels **14, 16** are positioned at opposite ends of the central body **12** so as to confront each other. A third zipper **22a,b** is positioned along the opposite edges **24, 26** (of the rectangular shaped piece of fabric) of the central body **12**. In this configuration and when the opposite edges **24, 26** of the central body **12** are positioned adjacent to each other such that the pet carrier **12** is in its expanded position (as best shown in Figures 1 and 2), the pet carrier defines a tubular form.

[0027] The collapsible pet carrier **10** of the present invention further comprises first and second handles **28, 30** attached to the central body **12**. The first and second handles **28, 30** are positioned adjacent to the opposite edges **24, 26** (of the rectangular shaped piece of fabric) of the central body **12** and extend upwardly away from the central body **12**. The collapsible pet carrier **10** still further comprises first **32** and second end panel tabs **34**. The first **32** and second end panel tabs **34** are connected to the two end panels **14, 16** and extend upwardly away from the two end panels **14, 16**. Although not shown, the collapsible pet carrier **10** also includes a detachable carrying strap. The carrying strap is detachable connected to the first **32** and second end panel tabs **34** by way of first and second snap hooks (not shown).

[0028] As best shown in Figure 3, the rectangular shaped piece of fabric (of the central body **12**) and the triangular or round shaped pieces of fabric (of the end panels **14, 16**) are made of a flexible woven or knit thread material. The woven thread material has a multiplicity of gaps **36** between the threads **38**. The multiplicity of gaps **36** between the

threads **38** are sized and configured to allow the transmission of visible light through the multiplicity of gaps **36** in an amount sufficient for the small dog or cat to see outside the pet carrier **12** when being carried within the pet carrier **12**.

[0029] The pet carrier **12** can readily be configured into at least three different positions; namely (Figures 1,2, 5, and 6), (1) a fully expanded position, (2) a collapsed wound position (Figure 7B), and (3) a collapsed folded position (Figure 8E).

[0030] The pet carrier **12** may further comprise a removable floor (not shown) positioned within the central body. The floor removable floor is in some embodiments a rectangular shaped piece of carpet.

[0031] While the present invention has been described in the context of the embodiments illustrated and described herein, the invention may be embodied in other specific ways or in other specific forms without departing from its spirit or essential characteristics. Therefore, the described embodiments are to be considered in all respects as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing descriptions, and all changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

CLAIMS

What is claimed is:

1. A collapsible pet carrier for carrying a small dog or cat, wherein the pet carrier has at least an expanded position and a collapsed wound position, and wherein the pet carrier is free of rigid support members and comprises:

a central body positioned between two detachable end panels, wherein the central body is made from a rectangular shaped piece of fabric, and wherein each of the two end panels are made from triangular or round shaped pieces of fabric;

characterized in that when the pet carrier is in its expanded position the pet carrier has a tubular form, wherein the tubular form is defined by (i) positioning the opposite edges of the rectangular shaped piece of fabric of the central body adjacent to each other, and (ii) positioning each of the end panels at opposite ends of the tubular form so as to confront each other, and wherein when the pet carrier is in its collapsed wound position the pet carrier takes the form of a coiled roll, wherein the coiled roll is defined by winding the rectangular shaped piece of fabric of the central body together with the triangular or round shaped pieces of fabric of the end panels unto itself in a circular fashion; and

wherein the rectangular shaped piece of fabric and the triangular or round shaped pieces of fabric are made of a flexible and pliable woven thread material, wherein the woven thread material has a multiplicity of gaps between the threads, wherein the multiplicity of gaps between the threads are sized and configured to allow the transmission of air and visible light through the multiplicity of gaps, and wherein the transmission of air is in an amount sufficient for the small dog or cat to see outside the pet carrier when being carried within the pet carrier.

2. The collapsible pet carrier of claim 1 wherein the pet carrier also has a collapsed folded position.

3. The collapsible pet carrier of claim 1 wherein the two end panels are detachably connected to the central body by way of first and second zippers.
4. The collapsible pet carrier of claim 3, further comprising a third zipper positioned along the opposite edges of the rectangular shaped piece of fabric of the central body.
5. The collapsible pet carrier of claim 4, further comprising first and second handles attached to the central body, wherein the first and second handles are positioned adjacent to the opposite edges of the rectangular shaped piece of fabric of the central body and extend upwardly away from the central body.
6. The collapsible pet carrier of claim 5, further comprising first and second end panels tabs, wherein the first and second end panel tabs are connected to the two end panels and extend upwardly away from the two end panels.
7. The collapsible pet carrier of claim 6, further comprising a detachable carrying strap, wherein the carrying strap is detachable connected to the first and second end panel tabs by way of first and second snap hooks.
8. The collapsible pet carrier of claim 7, further comprising a removable floor positioned within the central body.
9. The collapsible pet carrier of claim 8 wherein the floor is a rectangular shaped piece of carpet.

ABSTRACT OF THE DISCLOSURE

An innovative collapsible pet carrier is disclosed that is especially adapted and configured for carrying a small dog or cat. The inventive pet carrier is made of a durable, pliable, and flexible low-thread count weave material that, because of the relatively large spacings and gaps between the threads, allows for air flow and for the pet to see out in all directions (when the pet is within the pet carrier). In addition, and because the fabric is flexible and pliable, the pet carrier is able to bend and conform to the contours or shape of the pet such that the pet owner can readily grasp and comfort and/or control the pet (when the pet is within the pet carrier). The pet carrier can readily be configured into at least three different positions; namely, (1) a fully expanded position, (2) a collapsed wound position, and (3) a collapsed folded position.