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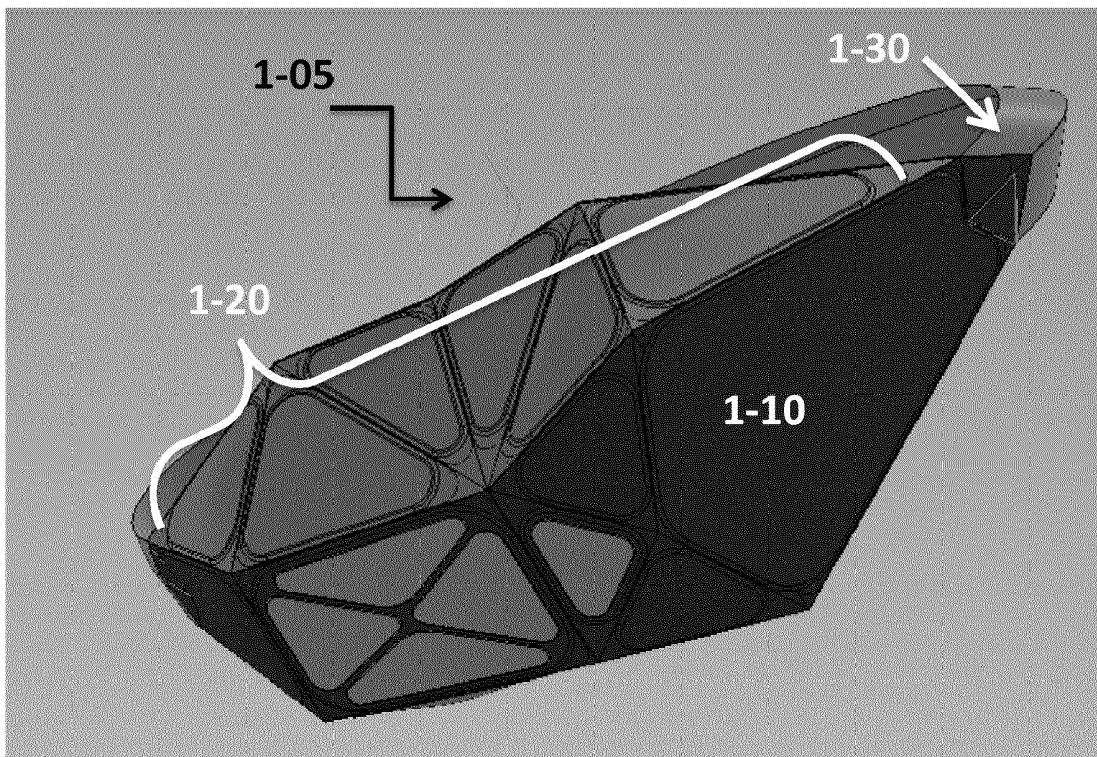
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### (54) VERSATILE INFANT CARRIER

(57) An infant carrier (1-05) is provided comprising a shock absorbing base (1-10) to support and accommodate an infant, at least one composite semi-elastic collapsible carrying strap (1-30) permanently affixed to said shock absorbing base; and a padded fabric insert (1-20) which is of a length sized to span the length of said angled

shock absorbing base, is of a width sized to span beyond the width of said angled shock absorbing base and provides supportive sides, is comprised of supportive, shock absorbing paneling, and is affixed to said shock absorbing base.

Figure 1



## Description

### BACKGROUND OF THE INVENTION

**[0001]** A variety of infant carriers are commercially available, which enable the parent or caregiver to transport an infant which provide limited "hands free" circumstances. Some solutions provide same while enabling the storing and transporting of needed accessories.

**[0002]** Child carriers are available that securely cradle a child but typical carriers are fashioned for transport in automobiles or other moving vehicles, which carriers are bulky and/or quite heavy and are not transportable easily.

**[0003]** Furthermore, safety carriers more typically call for circumstances where the child is removed from same and then accommodated in a soft carrier, typically significantly strapped to the parent or caregiver for transport of the infant when the caregiver seeks greater mobility when walking or running.

### SUMMARY OF THE INVENTION

**[0004]** This invention provides, in some embodiments, a versatile infant carrier, which safely and securely shields a child and incorporates shock absorbing materials, yet is lightweight and provides for easier safer transport of the infant.

**[0005]** This invention provides an infant carrier, which is lightweight yet provides a protective environment for the thus transported infant, which promotes interaction between the infant carried in same and the caregiver thus transporting the infant.

**[0006]** In some aspect, the term "infant carrier" refers to an apparatus of suitable strength and security, to provide a soft and safe means of transport of an infant or baby of a given weight. In some aspects, the term "carrier" refers to a means of transporting the infant by a caregiver, whereby the apparatus in use promotes a means of the body of the caregiver bearing at least a portion of the weight of the infant on a part of their person, in an easier manner.

**[0007]** In some aspects, the infant carrier is appropriate for use with infants as young as a newborn, and of an age of up to about 6 months, or in some embodiments, of a weight of up to about 22 pounds, or of up to about 10 kilograms in weight.

**[0008]** In some aspects, the infant carrier is specifically designed to provide the caregiver of the infant a safe means of transporting the infant in a "hands-free" method. In some aspects, the infant carrier of this invention allows for cross-body positioning of the infant in a secure and impact-lowering manner that provides a soft and comfortable resting place for the infant and the wearer/caregiver.

**[0009]** In some aspects, an advantage of the infant carriers of this invention is the means to move infant from a carrying position on the body of the wearer, to placement on a surface such as a floor or table or solid surface of

the like, without the need to remove an infant from a series of straps or harnesses, and such that the infant is not removed from the carrier, in effect placing the infant within the carrier on a surface in a comfortable manner.

**[0010]** According to this aspect and in some embodiments, the infant carrier provides the added advantage that a sleeping infant may be easily and readily taken off the body of the caregiver and placed on any appropriate surface, for example, representing nonlimiting embodiments, placement on a floor or table, without the baby waking during his/her removal from the carrier apparatus.

**[0011]** This invention provides, in some aspects, an infant carrier comprising a shock absorbing base, to which a composite padded insert is applied, which bonds to the base and provides a softer support for the baby to rest thereon, while providing impact resistant sides which help secure the infant placed therein. The infant carrier may further comprise a semi-elastic strap which is affixed to each terminus of the base, and which strap promotes easy transport of the infant while placed in the carrier.

**[0012]** In some aspects, the padded insert is a composite material, comprising an outer surface comprised of a polymeric textile, an inner surface comprised of a soft fabric and at least one smart molecular polymeric panel incorporated between the outer and inner surfaces. In some aspects, the smart molecular polymeric panel is D30 or a similar substance that is impact absorbing.

**[0013]** It will be appreciated that the infant carriers of this invention may comprise a smart polymeric molecular material on any externally exposed surface, which in turn may in some embodiments, provide for shock absorbing protection to an infant within the carriers of this invention, and same represents envisioned aspects of this invention.

**[0014]** In some aspects, a distinct advantage of the infant carriers of this invention is that it is lightweight and comprised of environmentally friendly materials. In some aspects, the infant carriers of this invention promote "greener living" in providing a carrier that is safe, light weight and more suitable for safe transport of an infant via environmentally friendly transport means, e.g. walking, or on a train or bus, whereby the infant can be easily transported and the caregiver need not concern him/her self with a bulky safety seat which is not easily transported by hand. In some aspects, an additional advantage to the instant infant carrier is the promoting of greater interaction between caregiver and infant positioned on the caregiver, in close proximity to the caregiver, with safety comparable to that provided by a child or infant safety seat, yet which safety seat is far too bulky and/or heavy to promote close proximity/ease of carrying/positioning the infant close to the caregiver, in contrast to the instant infant carriers.

**[0015]** In some aspects, the infant carrier base is a shock absorbing base comprised of any appropriate shock absorbing material, for example, any rubber material, crushable foam, smart polymer or others, as will be appreciated by the skilled artisan. In some aspects,

the base will comprise a crushable foam such as expanded polypropylene (EPP), expanded polyurethane (EPU), expanded polystyrene (EPS), or combinations of same, such as, for example, Tau Multi Impact Technology or Re-Up Foam, expanded polylactic acid (E-PLA), cellufoam, or any beaded foam, such as, for example, Brock Foam Brock USA and many others.

**[0016]** In some aspects the shock absorbing base will be comprised of a polymeric smart material as herein described.

**[0017]** In some aspects, the shock absorbing base will also be comprised of a waterproof material. In some aspects, according to this embodiment, specific use of waterproof materials provides for the ability to place the infant on a hard surface that may be wet, yet the infant seated within a carrier of this invention leaning thereon will remain dry and comfortable.

**[0018]** In some aspects, the shock absorbing base and/or composite insert and/or composite strap may further comprise a material that serves as an insect repellant and/or may further incorporate an antimicrobial. In some aspects, the shock absorbing base and/or composite insert and/or composite strap will comprise natural antimicrobial and insect repellent materials, such as, for example, copper and silver-based materials such as copper oxide and silver oxide containing materials, and others, as will be appreciated by skilled artisans.

**[0019]** In some embodiments, the shock absorbing base will also be slightly angled, such that the infant placed thereupon will not be positioned fully flat on the base. In some aspects, and as will be appreciated by the skilled artisan, there are a number of benefits to positioning an infant on a slight incline including, but not limited to, reduced strangulation, improved digestion, improved strengthening of developing muscles in particular of the back and neck of the infant, and others as will be appreciated by the skilled artisan.

**[0020]** In some aspects, the angle will be any slight incline that is desired, and in some embodiments, an angle of 110 degrees with respect to the applied surface is considered.

**[0021]** It will be appreciated that the base of the infant carriers of this invention may be so constructed so as to promote the infant being positioned at any desired incline.

**[0022]** The infant carriers of this invention will comprise a composite insert, having a surface that is bonded to the underlying shock absorbing base, and a softer surface with which the infant is in direct contact.

**[0023]** In some aspects, the composite insert will be a padded fabric insert, comprising an outer surface comprised of a polymeric textile and an inner surface comprised of a soft fabric. The infant carrier inserts of this invention will in some aspects be reinforced, such that at least one smart molecular polymeric panel is incorporated between the outer and inner surfaces of the insert. In some aspects, an advantage of incorporating the smart molecular polymeric panel is the ability to provide pro-

tection to the infant in the carrier from outside forces that may inadvertently be applied to the carrier, ranging from simple jostling in transport to protection from any outside object which may impact the carrier and potentially harm the infant placed within the carrier.

**[0024]** In some aspects, the smart molecular polymeric panel is constructed of any appropriate smart molecular polymeric material, for example, as described in United States Patent Numbers 8,087,101, 5,090,053, 5,180,619, or 6,093,468, which are hereby incorporated by reference in their entirety.

**[0025]** In some aspects, the infant carriers of this invention may comprise one or more pockets for storage of desired articles and in some aspects, such pockets may be incorporated within the insert.

**[0026]** In some aspects, the infant carriers of the invention may comprise one or more canopies or covers, and in some aspects, such canopy/ies may be incorporated within the insert. In some aspects, such canopy/ies may be retractable.

**[0027]** In some embodiments, the infant carriers of the invention may comprise one or more security straps to securely harness the infant within the carrier. In some embodiments the security straps are secured within the shock absorbing base of the carriers of this invention and span through the insert to comfortably secure the infant. In some aspects the security straps are secured within the padded insert, which insert is securely bonded to the base of the infant carrier.

**[0028]** It will be appreciated that any number of security straps, orientation and positioning of same is envisioned, which security straps are securely attached to the carrier to serve as a further safety feature securing the infant to the carrier to prevent jostling of the infant or inappropriate positioning of the infant within the carrier.

**[0029]** The infant carriers of this invention will further comprise at least one strap for ease of transport of the carrier. In some aspects, the strap will be a composite semi-elastic collapsible carrying strap comprised of a semi-elastic material.

**[0030]** In some aspects, the "composite semi-elastic collapsible carrying strap" refers to a carrying strap comprised of at least two materials, a first providing some elasticity to the strap so that the strap can be more flexible, characterized by greater freedom of movement. It is noted that the semi-elastic property of the strap denotes however that the strap possesses sufficient rigidity to provide sufficient support for the caregiver when the infant carrier is being worn on the caregiver body. Furthermore, the strap is further characterized by a semi-rigid structure of being upright or folded in a particular means to surround or otherwise support the carrier structure.

**[0031]** In some aspects, the at least one composite semi-elastic collapsible carrying strap is semi-rigid and remains upright unless specifically folded. In some embodiments, the at least one composite semi-elastic collapsible carrying strap, when folded, provides support for

the infant carrier sides.

**[0032]** Referring specifically to Figure 3B, as an embodied example of this aspect, the straps 3-30 can be separated and moved laterally approximately 90 degrees to surround and support the insert sides.

**[0033]** In some aspects, it is specifically envisioned that the infant carrier incorporates two composite semi-elastic collapsible carrying strap. According to this aspect, the composite straps, when folded, are positioned perpendicularly to their upright position and provide support circumferentially around the carrier sides to provide greater support for the infant carrier when not in transport.

**[0034]** In some aspects, the at least one composite semi-elastic collapsible carrying strap is a cross-body strap, which in some aspects, may be worn across the body of the caregiver when transporting the carriers of this invention. In some aspects, the at least one composite semi-elastic collapsible carrying strap is an over-the-shoulder strap.

**[0035]** In some embodiments, the at least one composite semi-elastic collapsible carrying strap may have additional safety features incorporated in same, such as, for example, a securing closure, such as, for example, that which is found in safety belts in the automotive industry to promote quick and safe release of the strap, as needed.

**[0036]** This invention provides, in some embodiments, an infant carrier comprising:

- a shock absorbing base of a length sized to support and accommodate an infant;
- at least one composite semi-elastic collapsible carrying strap permanently affixed at each terminus to termini of said shock absorbing base; and
- a padded fabric insert, which padded fabric insert:

o is of a length sized to span the length of said angled shock absorbing base;  
o is of a width sized to span beyond the width of said angled shock absorbing base and providing supportive sides;  
o is comprised of supportive, shock absorbing paneling; and  
o being affixed to said shock absorbing base.

**[0037]** In some aspects, the invention provides a method of securely transporting an infant making use of an infant carrier as herein described. In some aspects, the invention provides a method of securely positioning an infant on a surface while the infant is comfortably placed within an infant carrier as herein described, whereby the infant may also be transported within the secure infant carrier, without need for moving the infant or further adjusting the infant, and while providing a lightweight safe carrier.

**[0038]** In some embodiments, this invention provides a method of promoting secure carrying of an infant and secure positioning of an infant on a surface by a caregiv-

er, said method comprising placing said infant in an infant carrier, which infant carrier comprises

- a shock absorbing base of a length sized to support and accommodate an infant;
- at least one composite semi-elastic collapsible carrying strap permanently affixed at each terminus to termini of said shock absorbing base; and
- padded fabric insert, which padded fabric insert:

o is of a length sized to span the length of said angled shock absorbing base;  
o is of a width sized to span beyond the width of said angled shock absorbing base and providing supportive sides;  
o is comprised of supportive, shock absorbing paneling; and  
o being affixed to said shock absorbing base.

20 wherein said infant is positioned on said padded fabric insert and optionally secured to same via safety straps, within said infant carrier while said infant carrier is placed on a given surface and said caregiver lifts said infant carrier with said infant securely located therein and secures same to said caregiver person by means of said at least one composite semi-elastic collapsible carrying strap, thereby promoting secure carrying of said infant.

**[0039]** In some embodiments, the methods employing/use of the infant carriers of this invention provide protection to the infant from back or neck trauma during carrying of the infant or when the infant is placed within the carrier, even when not in transport.

**[0040]** In some aspects, the infant carriers of this invention have been specifically industrially designed such that the transition from a state whereby the infant is carried within the carrier to the state whereby the infant is placed on a surface, while in the carrier, occurs smoothly and without any bending or jostling or inappropriate collapse in the carrier, in particular in the regions where the head and neck of the infant are positioned, specifically protecting the infant from any trauma and promoting ultimate safety in particular to these regions of the body of the infant located within the carrier.

**[0041]** In some embodiments, the methods employing/use of the infant carriers of this invention provide protection to the infant from impact with a hard surface or object, during carrying of said infant or when the infant is placed within the carrier, even when not in transport.

**[0042]** In some aspects, this invention provides a unique carrier that promotes mother-infant or caregiver-infant bonding, providing a lightweight and protective carrier that promotes easy placement of an infant on the body of the parent/caregiver in a manner that positions the infant in a secure light means, within an ideal positioning in terms of visual engagement between the two.

**[0043]** The present invention includes many aspects and features. Thus, in some aspects the invention relates to an infant carrier, which serves as a safe and secure

means of transport of an infant, the present invention is not limited to use only in transporting the infant. For example, and in some embodiments, the carrier is useful as a baby bed and as a diaper changing station without regard to whether a baby is actually carried about or transported. Similarly, it is to be understood that the infant carriers of this invention may be used in a manner consistent with use of any baby seat or carrier, as known in the art.

**[0044]** Accordingly, in some aspects of the present invention, the infant carriers of this invention may be configured for transport of the infant, as well as for providing a soft and safe environment for positioning the infant for other activities where a portable, light weight secure housing in a "hands free" configuration is desired, e.g. for feeding the infant, changing a diaper of the infant, or allowing ease of removal of the infant from the body of the caregiver transporting the infant to provide a safe respite for the caregiver to rest e.g. on a long walk or long commute.

**[0045]** It will be appreciated that any infant accessory may be used with the carrier and in some aspects, optionally stored within the carrier, for example, a baby blanket or pacifier may be secured within the carrier via tabs or Velcro or other means, or stored within the pockets of the carrier as described.

**[0046]** In some aspects, the insert may comprise padding and cushioning, which in some aspects may be preferentially thicker in some regions than others, for example around the region where the head of the infant will rest.

**[0047]** In some aspects, a washable insert may be further secured to the infant carrier insert for additional padding, or in some embodiments, for more convenient and frequent laundering.

**[0048]** In some aspects, such padding or added inserts may be secured to the base or insert via any appropriate means including hook-and-loop or hook-and-eye fasteners, button fasteners, Velcro, zipper, string tying, etc.

**[0049]** It will be appreciated that all of the elements coming in contact with the infant may be prepared of materials and means for easy laundering of same.

**[0050]** It will be appreciated that any and all of the elements of the infant carriers of this invention may be further treated with materials, which in turn are antimicrobial or insect repellent materials.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0051]** Various embodiments of the infant carriers of this invention are described herein with reference to the figures wherein:

Figure 1 depicts an embodied infant carrier **1-05** of this invention, where the shock absorbing base **1-10**, sides of the insert **1-20** and composite semi-elastic collapsible carrying strap **1-30** are seen.

Figure 2 depicts a side view of the embodied infant

carrier of Figure 1, further depicting the connection **2-50** of the composite semi-elastic collapsible carrying strap **2-30** to the padded insert **2-20**, where embodied supportive, shock absorbing paneling is seen **2-40**.

Figures 3A and 3B depict a top/side view of the embodied infant carrier of Figure 1, further depicting one aspect, whereby the area supporting a head of an infant may be elevated **3-60**, and the elevation may be an incline of the base or the padded insert or both. The elevation may be gradual and over a length of the base, for example, elevating **3-70** and **3-60** in a gradual incline or at two different angles of incline. The at least one composite semi-elastic collapsible carrying strap **3-30** may be comprised of two straps, with connection **3-50**, which may be each separated and moved laterally to circumferentially support the infant carriers of this invention, for example, when the carrier is placed on a surface, as opposed to being carried.

Figure 4 provides a side view of the elements depicted in Figure 3.

Figure 5 depicts positioning of an infant **5-80** in an embodied carrier **5-05** of this invention. The infant is cradled in the padded fabric insert **5-20**, and is positioned, in some embodiments, on a slight incline **5-60**.

Figures 6 and 7 depict relative positioning of positioning of an infant **7-80** in an embodied carrier **6-05; 7-05** with respect to a caregiver **6-90; 7-90** and the promoting of emotional bonding between the infant and the caregiver,

#### DETAILED DESCRIPTION OF THE INVENTION

**[0052]** This invention provides, in some embodiments, for unique infant carriers that are characterized by being very lightweight, providing greater hands free easy transport of an infant, and providing safety to the infant placed therewithin.

**[0053]** Referring to the Figures, and the embodied carrier depicted therein, the carriers of this invention may comprise a shock absorbing base **1-10** of a length sized to support and accommodate an infant. The infant carrier base **1-10** is comprised of a shock absorbing material and the composite semi-elastic collapsible carrying strap **1-30, 2-30** is permanently affixed at each terminus to termini of the shock absorbing base **2-50**.

**[0054]** The infant carriers of this invention still further comprise a padded fabric insert **2-20**, which padded fabric insert is of a length sized to span the length of said angled shock absorbing base and is of a width sized to span beyond the width of said angled shock absorbing base and providing supportive sides. The insert may further comprise supportive, shock absorbing paneling. For example and in some embodiments, the supportive shock absorbing paneling is specifically incorporated within the padded insert at the sides **2-40; 3-40**, and pro-

tects the infant located therewithin as described hereinabove.

**[0055]** The padded fabric inserts in the carriers of this invention are affixed to the shock absorbing base. In some aspects, the inserts are permanently affixed to the base, and in some aspects, the inserts are semi-permanently affixed in that when secured via a securing means they are not readily removed, however, when specifically released by the securing mechanism, the insert may be removed and for example, laundered.

**[0056]** As described herein, the base or the padded insert may be inclined to promote an incline for the positioning of certain parts of a body of an infant placed within a carrier of this invention. Referring to the figures, e.g. Figures 3 and 4, the base, insert or both may provide a gradual incline along half or most of the base/insert, or certain regions may be inclined at different angles of incline, e.g. **4-60** and **4-70** may be at different angles of incline or each part is gradually inclined along the same angle.

**[0057]** The infant carriers of this invention uniquely provide a safe environment for the infant to be both transported and placed in a comfortable position on the body of the caregiver/wearer, or on a solid surface in a hands-free manner. Referring to Figure 5 the infant **5-80** can be safely and comfortably positioned within a carrier, **5-05** of this invention, being cradled in the padded fabric insert **5-20**, which for example, may have a soft cotton or brushed wool or flannel or any desired interior. The interior may comprise any textile/fabric/desired material that may be patterned or contain any desired design, for example, further engaging the infant. It can be readily appreciated that toys or other educational implements may be incorporated within or attached to the inner soft padding to provide a more stimulating environment for the infant, if so desired.

**[0058]** As may be readily seen from the embodied depiction, the infant may be specifically inclined by the inclined base or insert **5-60**, which provides an advantage in terms of preventing strangulation or choking, in addition to promoting greater engagement of the infant with his/her surroundings.

**[0059]** The carrier insert further incorporates sections or panels of shock-absorbing material, for example, by incorporating a smart molecular polymeric material **5-40**. Such smart materials may also be incorporated within a base of the instant carrier, as well.

**[0060]** For added safety, in some embodiments, the infant carrier of this invention may further incorporate a safety harness **5-70**, for example as depicted in Figure 5. Any appropriate safety harness structure is envisioned and standards have already been set in the industry to address same and can be incorporated in the carriers of this invention.

**[0061]** The infant carriers of this invention may incorporate shock-absorbing panels of any shape, which it will be understood to be amenable to various designs and arrays. In some aspects, for example, as depicted in Fig-

ures 5-7, the panels may be of a desired geometric shape, for example, as depicted as triangular panels incorporated in the carrier.

**[0062]** It will be appreciated that any envisioned shape and pattern may be used for assembling the infant carriers of this invention, as a means of patterning shock absorbing panels or smart molecular polymeric panels of this invention, including circular, square, rectangular, diamond or any other desired shape or orientation.

**[0063]** Referring further to Figures 6 and 7, as will be appreciated, the embodied aspects of the invention provide for a relative positioning of an infant **7-80** with respect to a caregiver **6-90;7-90** to promote emotional bonding between the infant and the caregiver. In some aspects, such relative positioning provides for close proximity and ideal focal length for interaction between infant and caregiver even at the most early of ages, and furthermore, the relative positioning provides greater physical proximity between the infant and the caregiver.

**[0064]** While certain features of the invention have been illustrated and described herein, many modifications, substitutions, changes, and equivalents will now occur to those of ordinary skill in the art. It is, therefore, to be understood that the appended claims are intended to cover all such modifications and changes as fall within the true spirit of the invention.

**[0065]** It will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims. Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. Such equivalents are intended to be encompassed in the scope of the claims.

**[0066]** All publications, patents, and patent applications mentioned herein are hereby incorporated by reference in their entirety as if each individual publication or patent was specifically and individually indicated to be incorporated by reference. In case of a conflict between the specification and an incorporated reference, the specification shall control. Where number ranges are given in this document, endpoints are included within the range. Furthermore, it is to be understood that unless otherwise indicated or otherwise evident from the context and understanding of one of ordinary skill in the art, values that are expressed as ranges can assume any specific value or subrange within the stated ranges, optionally including or excluding either or both endpoints, in different embodiments of the invention, to the tenth of the unit of the lower limit of the range, unless the context clearly dictates otherwise. Where a percentage is recited in reference to a value that intrinsically has units that are whole numbers, any resulting fraction may be rounded to the nearest whole number.

**[0067]** In the claims articles such as "a", "an" and "the" mean one or more than one unless indicated to the contrary or otherwise evident from the context. Claims or

descriptions that include "or" or "and/or" between members of a group are considered satisfied if one, more than one, or all of the group members are present in, employed in, or otherwise relevant to a given product or process unless indicated to the contrary or otherwise evident from the context. The invention includes embodiments in which exactly one member of the group is present in, employed in, or otherwise relevant to a given product or process. The invention also includes embodiments in which more than one, or all of the group members are present in, employed in, or otherwise relevant to a given product or process. Furthermore, it is to be understood that the invention provides, in various embodiments, all variations, combinations, and permutations in which one or more limitations, elements, clauses, descriptive terms, etc., from one or more of the listed claims is introduced into another claim dependent on the same base claim unless otherwise indicated or unless it would be evident to one of ordinary skill in the art that a contradiction or inconsistency would arise. Where elements are presented as lists, e.g. in Markush group format or the like, it is to be understood that each subgroup of the elements is also disclosed, and any element(s) can be removed from the group. It should be understood that, in general, where the invention, or aspects of the invention, is/are referred to as comprising particular elements, features, etc., certain embodiments of the invention or aspects of the invention consist, or consist essentially of, such elements, features, etc. For purposes of simplicity those embodiments have not in every case been specifically set forth in *haec verba* herein. Certain claims are presented in dependent form for the sake of convenience, but Applicant reserves the right to rewrite any dependent claim in independent format to include the elements or limitations of the independent claim and any other claim(s) on which such claim depends, and such rewritten claim is to be considered equivalent in all respects to the dependent claim in whatever form it is in (either amended or unamended) prior to being rewritten in independent format.

## Claims

### 1. An infant carrier comprising:

- a shock absorbing base of a length sized to support and accommodate an infant;
- at least one composite semi-elastic collapsible carrying strap permanently affixed at each terminus to termini of said shock absorbing base; and
- a padded fabric insert, which padded fabric insert:
  - o is of a length sized to span the length of said angled shock absorbing base;
  - o is of a width sized to span beyond the width

of said angled shock absorbing base and providing supportive sides;  
 o is comprised of supportive, shock absorbing paneling; and  
 o being affixed to said shock absorbing base.

- 5 2. The infant carrier of claim 1, wherein said shock absorbing base is comprised of a rubber material.
- 10 3. The infant carrier of claim 1, wherein said shock absorbing base is waterproof.
- 15 4. The infant carrier of claim 1, wherein said shock absorbing base is comprised of a material that is an insect repellent.
- 20 5. The infant carrier of claim 1, wherein said shock absorbing base is angled.
- 25 6. The infant carrier of claim 5 wherein said angle is 110 degrees with respect to the surface on which the shock absorbing base is placed.
- 30 7. The infant carrier of claim 1, wherein said padded fabric insert is a composite material having an outer surface comprised of a polymeric textile, an inner surface comprised of a soft fabric and at least one smart molecular polymeric panel incorporated between the outer and inner surfaces.
- 35 8. The infant carrier of claim 7 wherein said padded fabric insert may comprise one or more pockets for storage of desired articles or wherein said padded fabric insert may comprise a retractable canopy for providing shading for an infant disposed within said carrier.
- 40 9. The infant carrier of claim 1, wherein said at least one composite semi-elastic collapsible carrying strap is comprised of a semi-elastic material.
- 45 10. The infant carrier of claim 1, wherein said at least one composite semi-elastic collapsible carrying strap is semi-rigid and remains upright unless specifically folded.
- 50 11. The infant carrier of claim 1, wherein said at least one composite semi-elastic collapsible carrying strap when folded provides support for the infant carrier sides.
- 55 12. The infant carrier of claim 1, wherein said at least one composite semi-elastic collapsible carrying strap is two straps or wherein said at least one composite semi-elastic collapsible carrying strap is a cross-body strap or wherein said at least one composite semi-elastic collapsible carrying strap is an

over-the-shoulder strap.

13. A method of promoting secure carrying of an infant and secure positioning of an infant on a surface by a caregiver, said method comprising placing said infant in an infant carrier, which infant carrier comprises

• a shock absorbing base of a length sized to support and accommodate an infant;

• at least one composite semi-elastic collapsible carrying strap permanently affixed at each terminus to termini of said shock absorbing base; and

• a padded fabric insert, which padded fabric insert:

o is of a length sized to span the length of said angled shock absorbing base;

o is of a width sized to span beyond the width of said angled shock absorbing base and providing supportive sides;

o is comprised of supportive, shock absorbing paneling; and

o being affixed to said shock absorbing base.

wherein said infant is positioned on said padded fabric insert and optionally secured to same via safety straps, within said infant carrier while said infant carrier is placed on a given surface and said caregiver lifts said infant carrier with said infant securely located therein and secures same to said caregiver person by means of said at least one composite semi-elastic collapsible carrying strap, thereby promoting secure carrying of said infant.

14. The method of claim 13, wherein said method protects said infant from back or neck trauma during carrying of said infant or when said infant is not mobile.

15. The method of claim 13, wherein said method protects said infant from impact with a hard surface or object, during carrying of said infant or when said infant is not mobile.

Figure 1

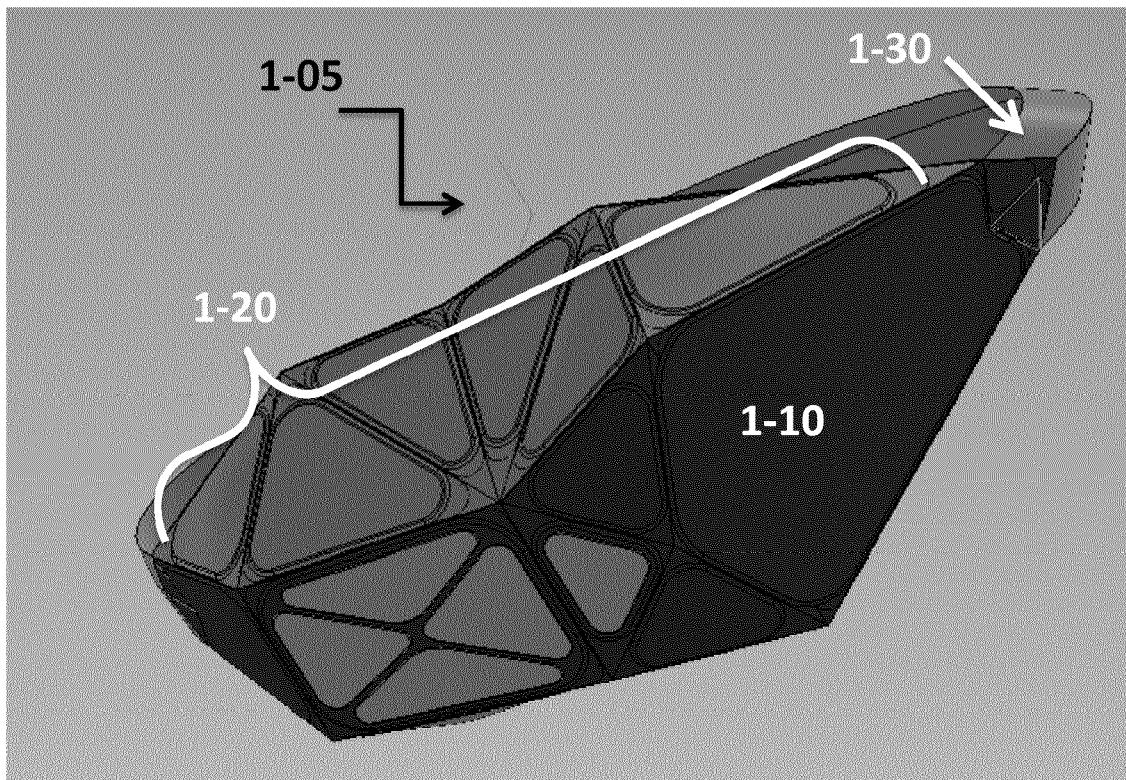


Figure 2

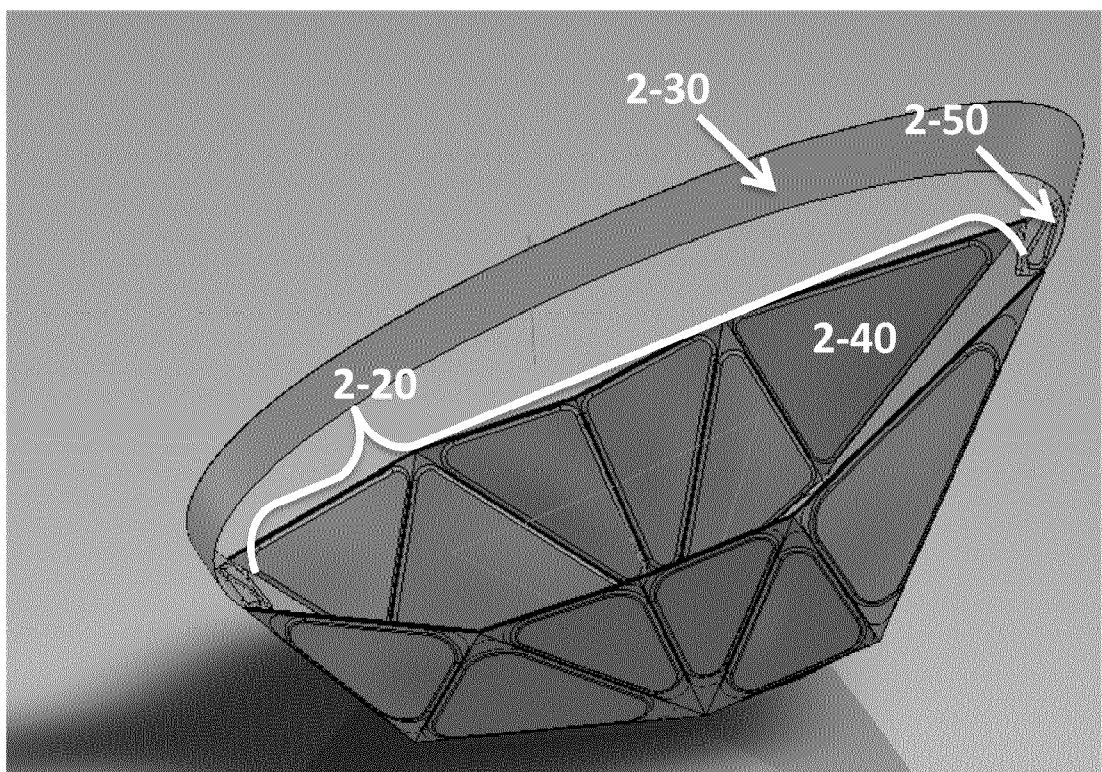


Figure 3A

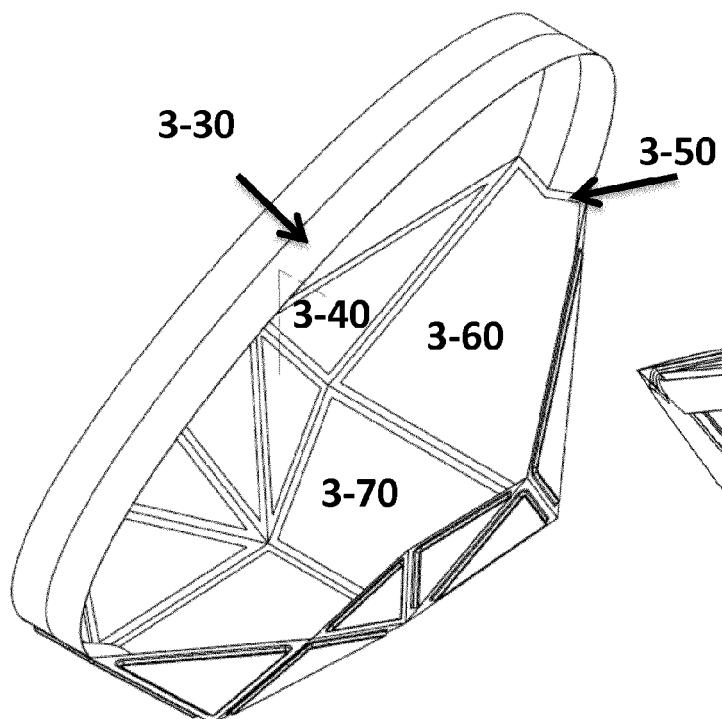


Figure 3B

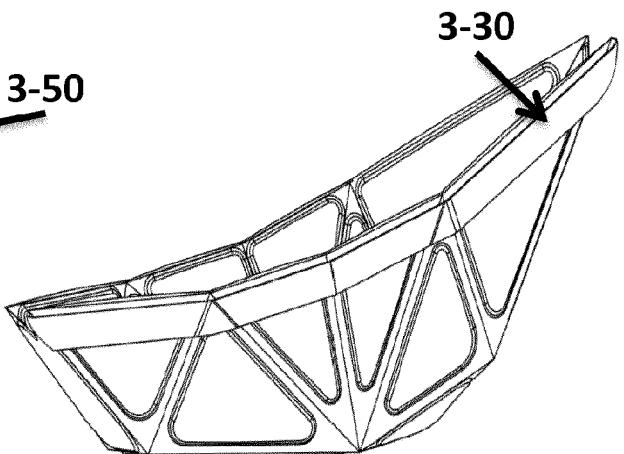


Figure 4

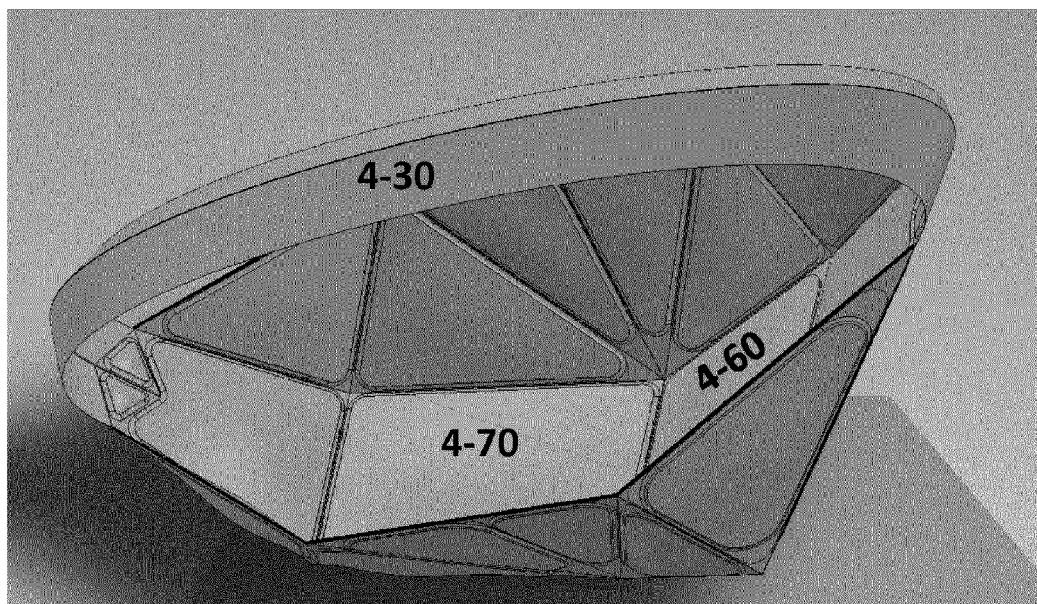


Figure 5

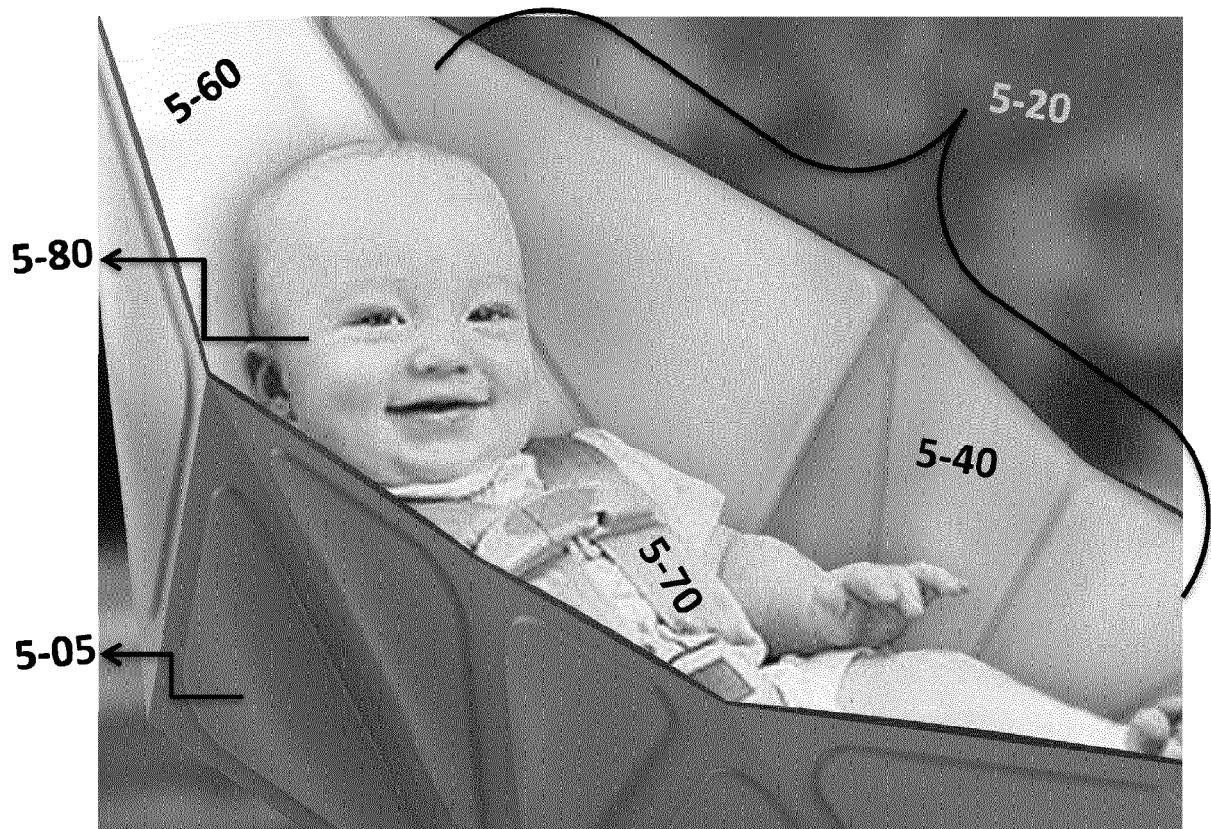


Figure 6

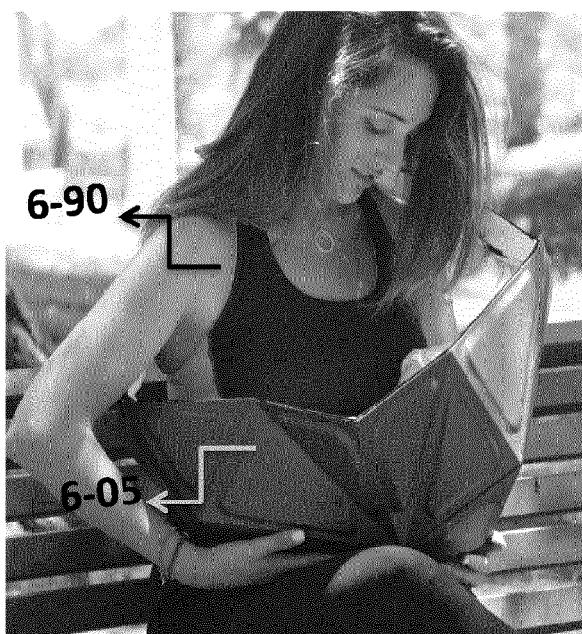
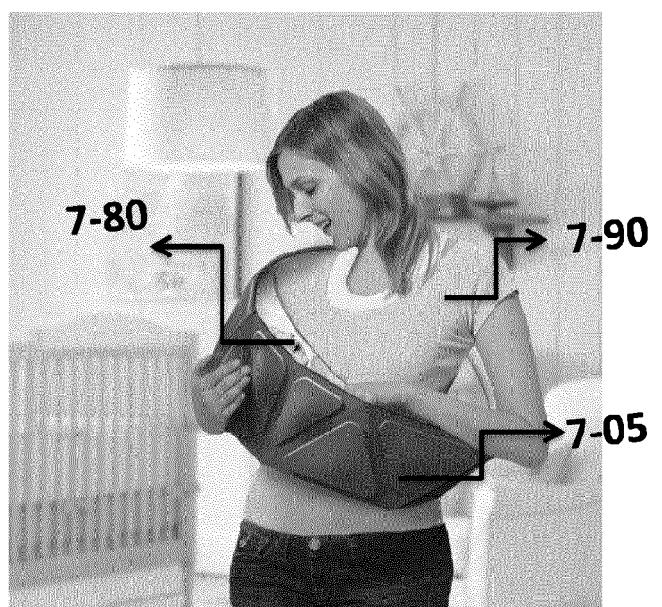


Figure 7





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Application Number

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55	Place of search The Hague	Date of completion of the search 27 October 2017	Examiner Pössinger, Tobias
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