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(54) **PORTABLE SHADE**

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(76) Inventors: **Michael E. Henley**, Santa Ynez, CA (US); **Thomas E. McConnell**, Santa Ynez, CA (US)

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Correspondence Address:

Kit M. Stetina, Esq./Mark B. Garred, Esq.
STETINA BRUNDA GARRED & BRUCKER
Suite 250
75 Enterprise
Aliso Viejo, CA 92656 (US)

(57) **ABSTRACT**

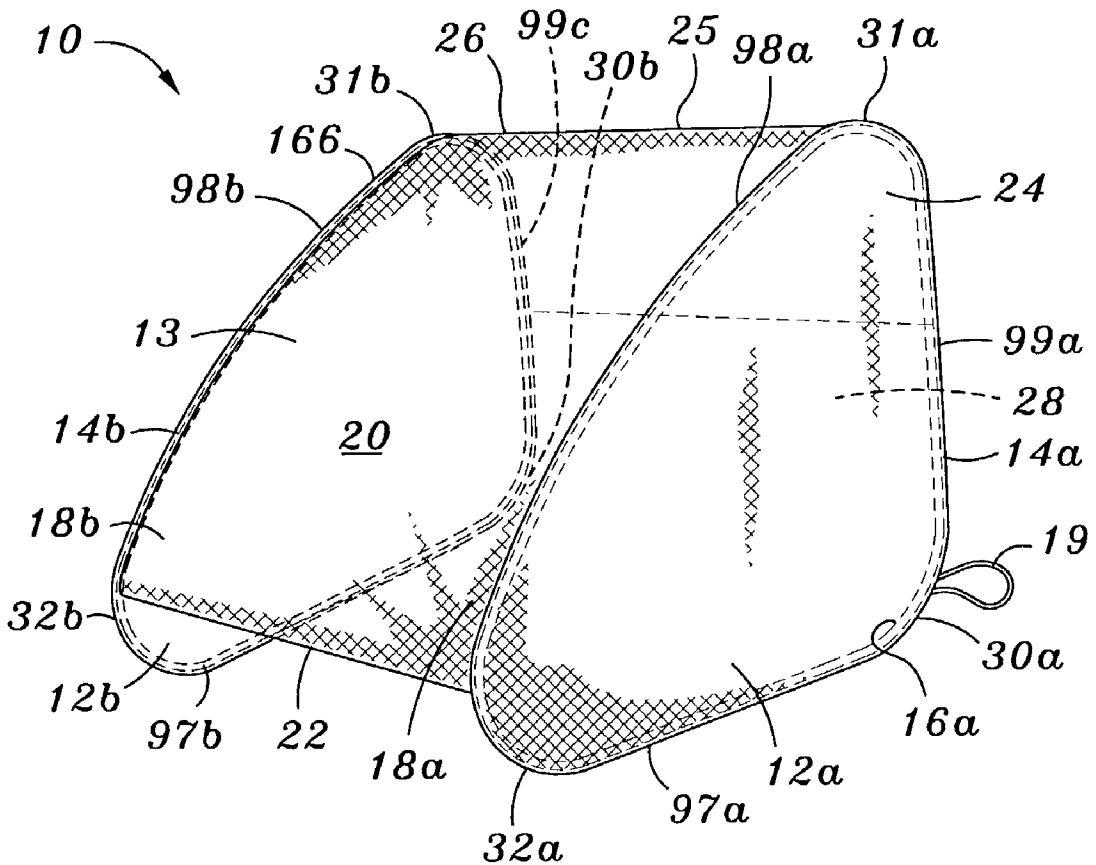
A collapsible shade device that includes two side panels connected by an intermediate sheet. Frame members are attached to the side panels and the frame members unfurl the side panels when the shade is in a deployed configuration, and the frame members can be coiled into a collapsed configuration for more convenient movement and storage of the shade device. One embodiment of the device is adapted to fit over a car seat to inhibit temperature increases on the surface of the seat. Another embodiment of the device is adapted to fit over a stroller to block sunlight, wind, insects, and the like from the stroller's occupant. Another embodiment of the device is adapted to fit over a stroller to also protect the occupant from inclement weather.

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Related U.S. Application Data

(60) Provisional application No. 60/347,810, filed on Nov. 6, 2001.



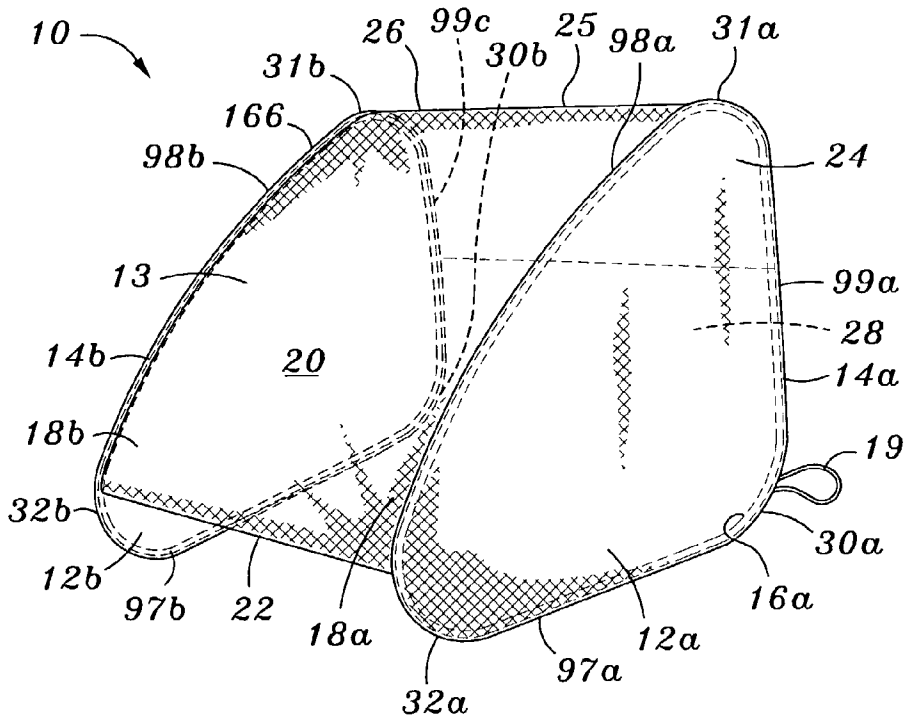


FIG. 1

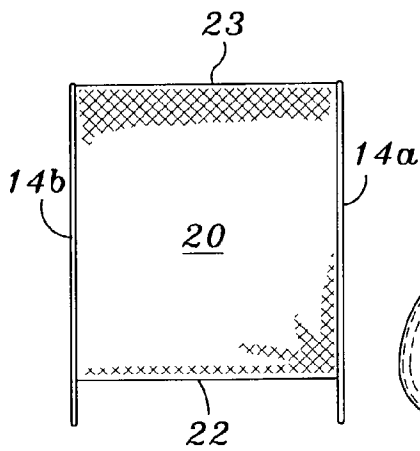


FIG. 2

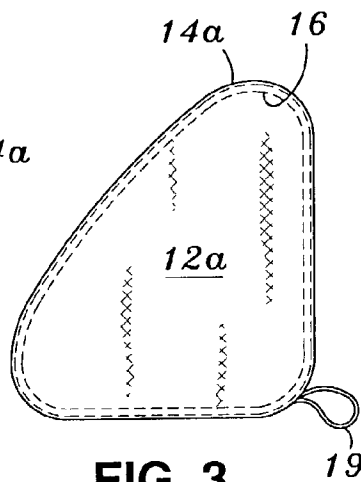


FIG. 3

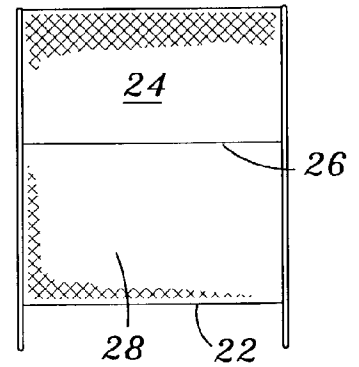


FIG. 4

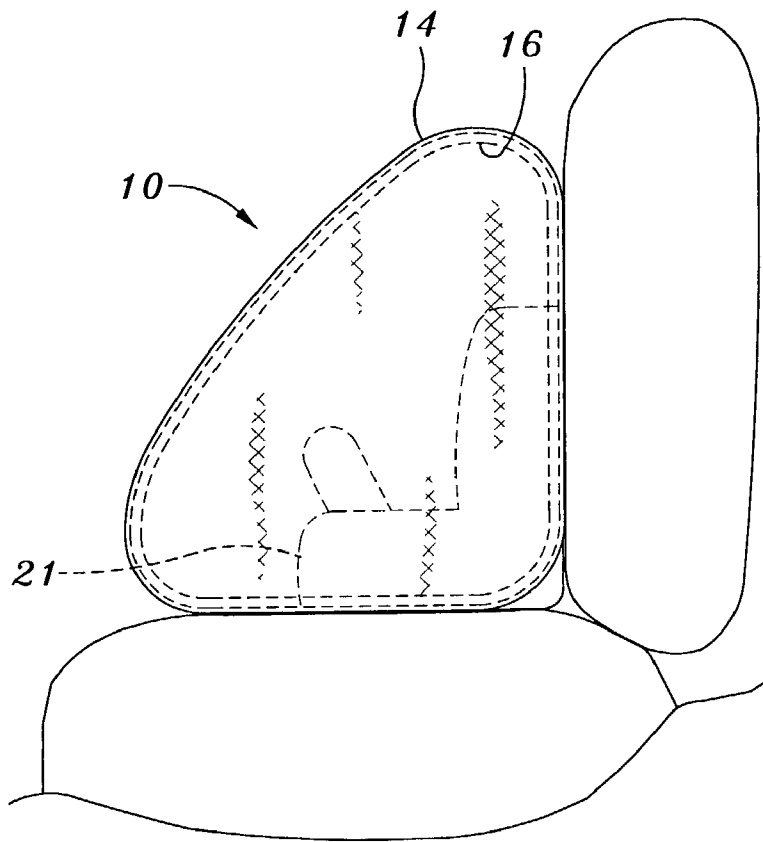


FIG. 5

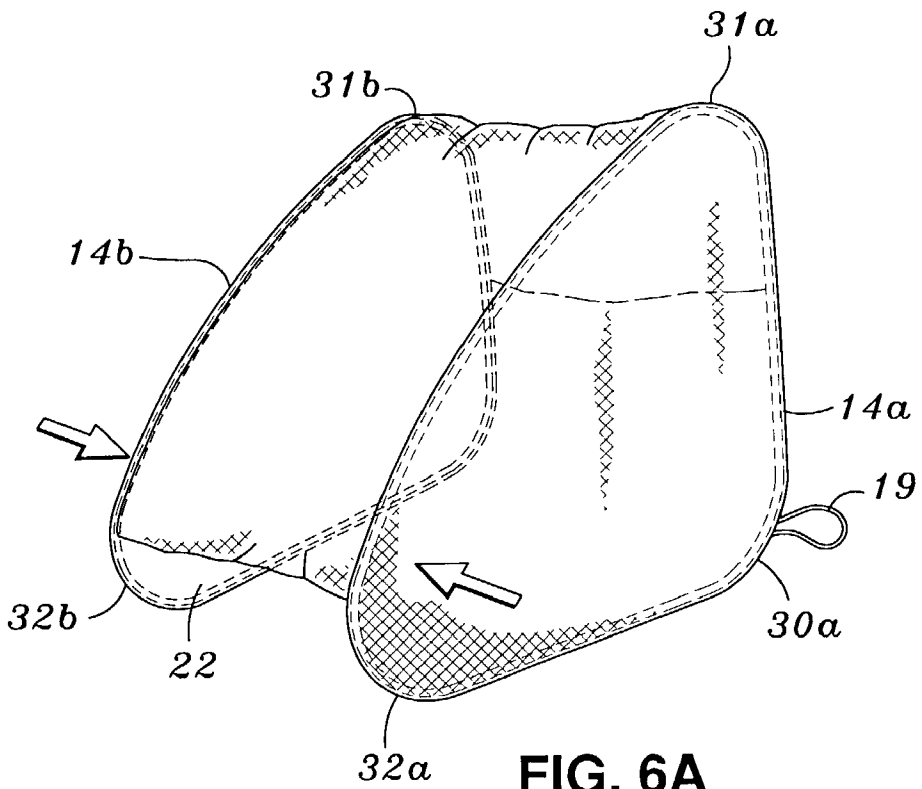


FIG. 6A

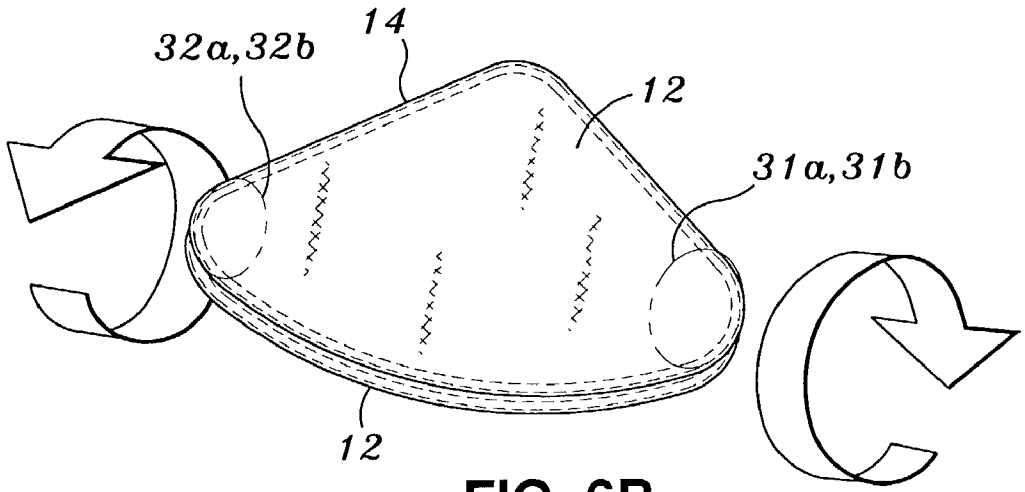


FIG. 6B

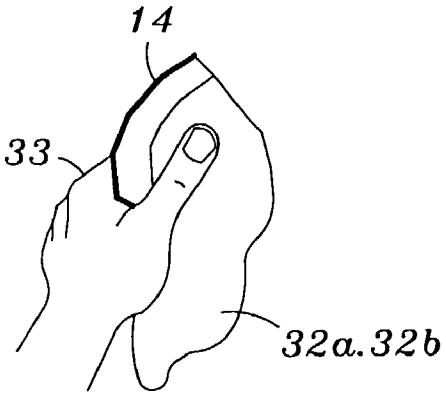


FIG. 6C

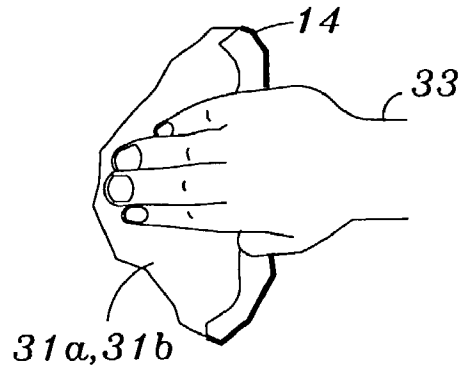


FIG. 6D

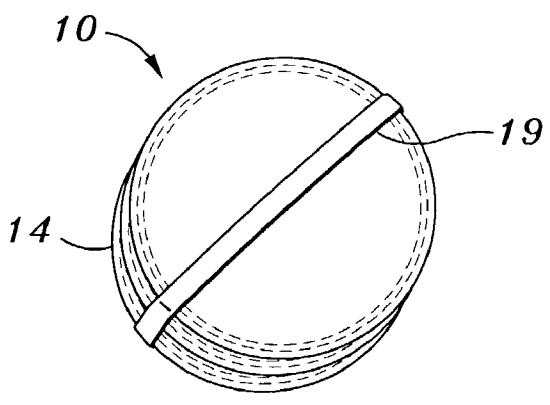


FIG. 6E

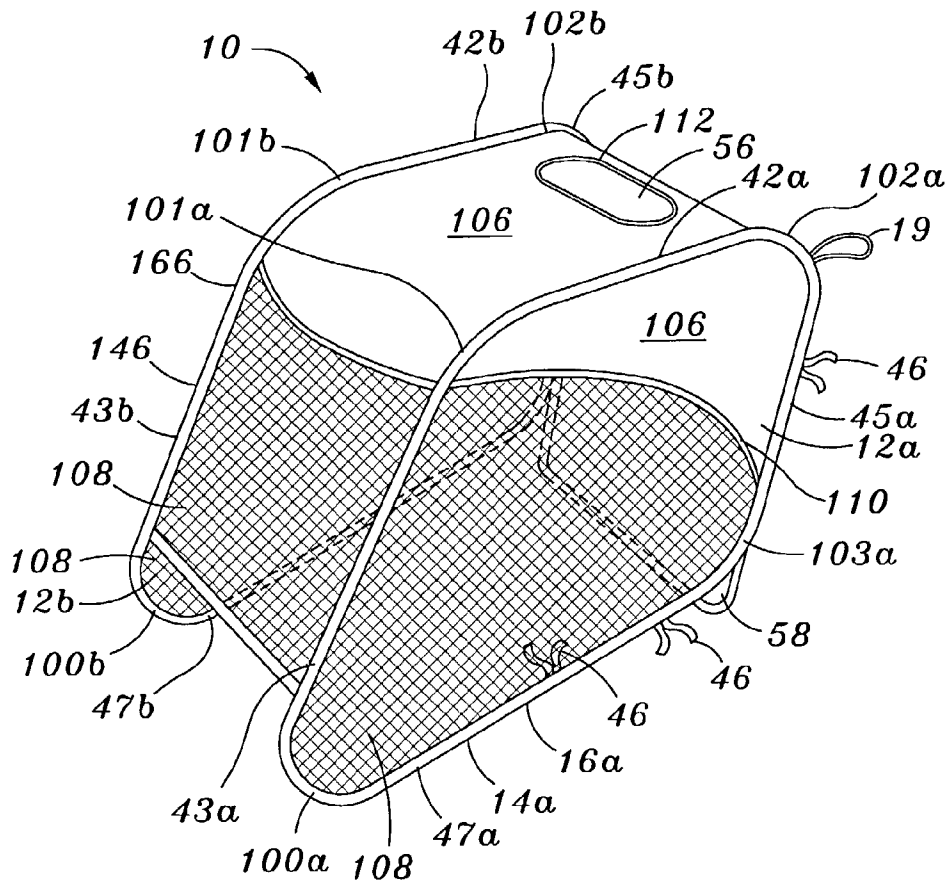


FIG. 7

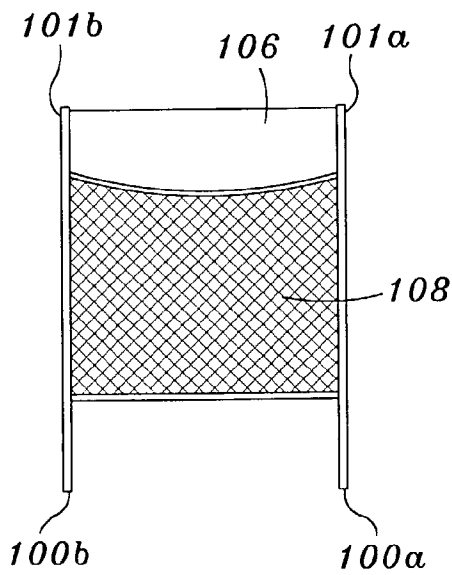


FIG. 8

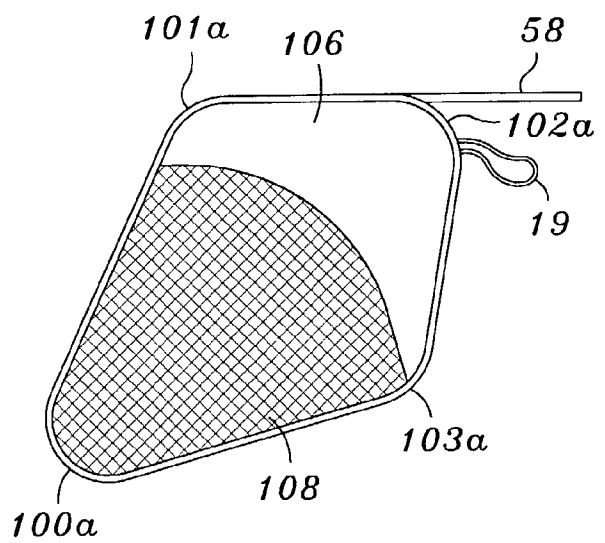


FIG. 9

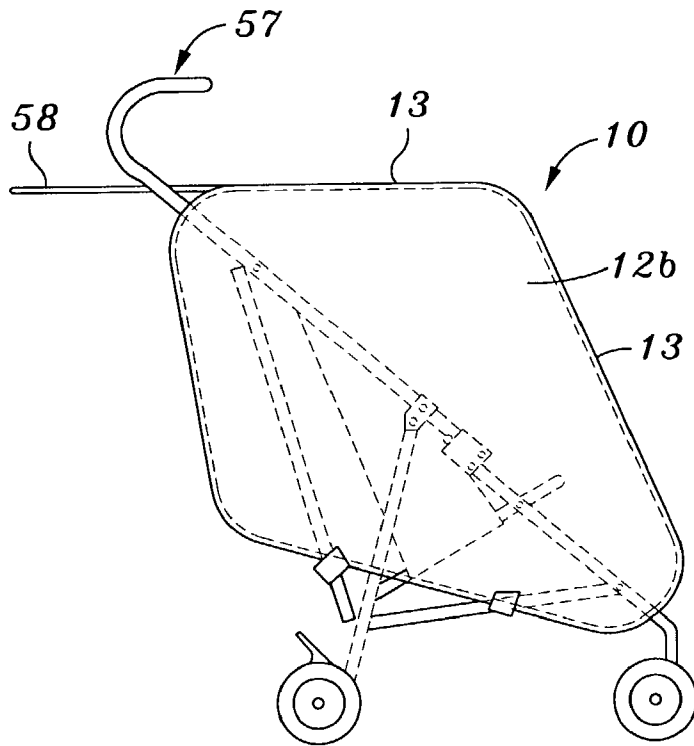


FIG. 10

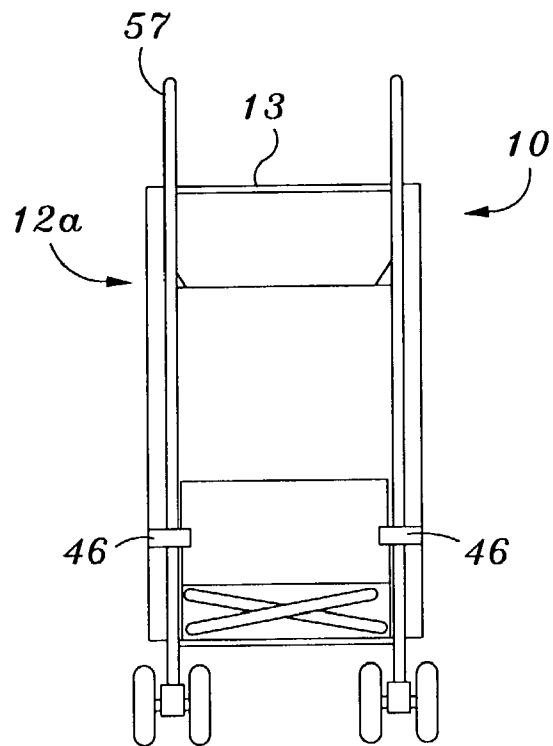
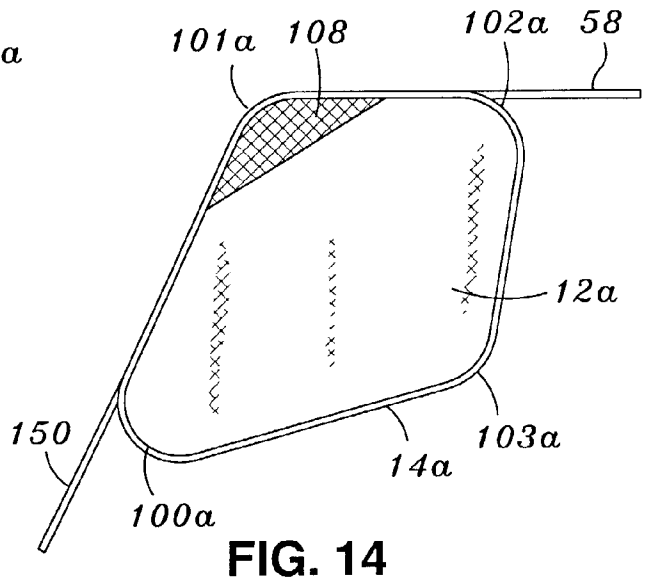
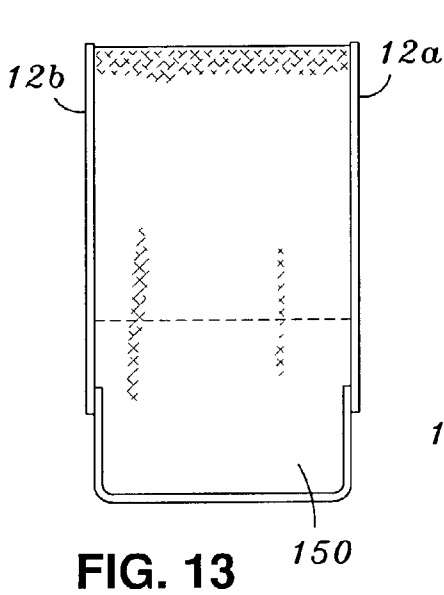
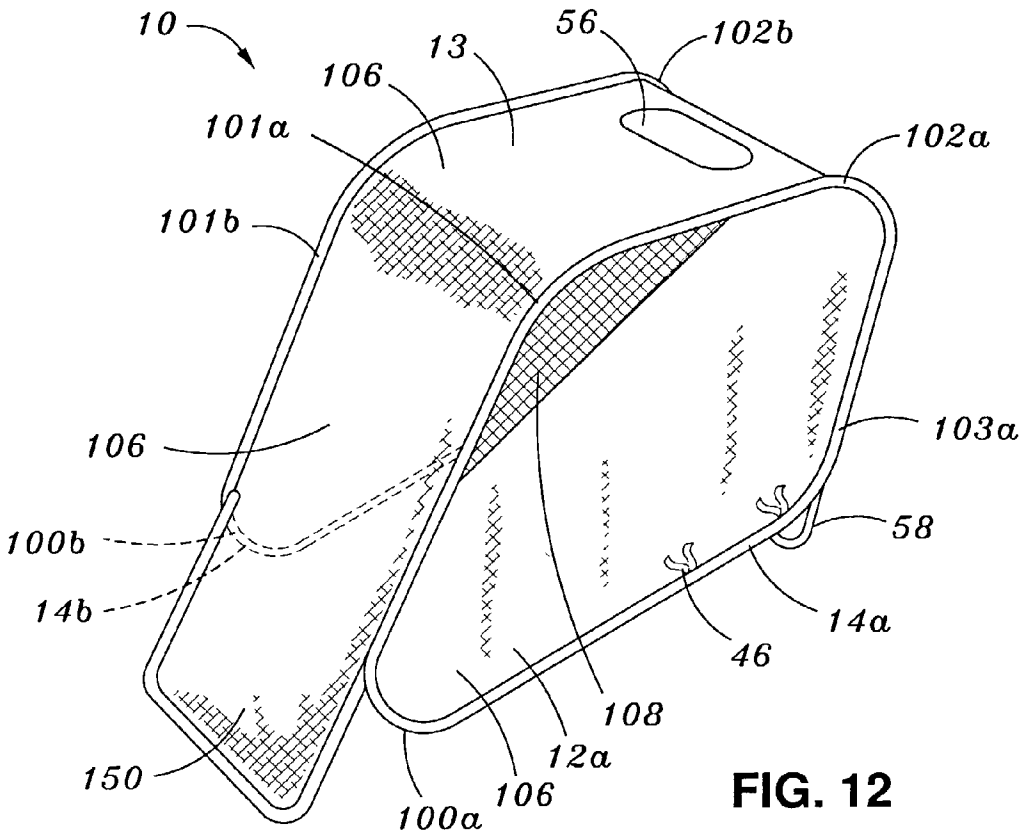


FIG. 11



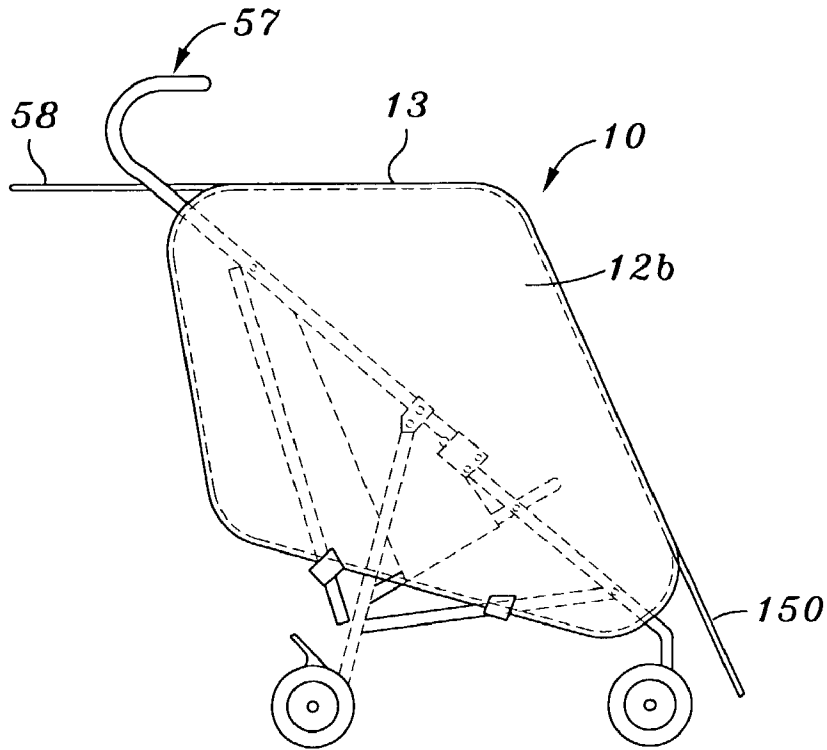


FIG. 15

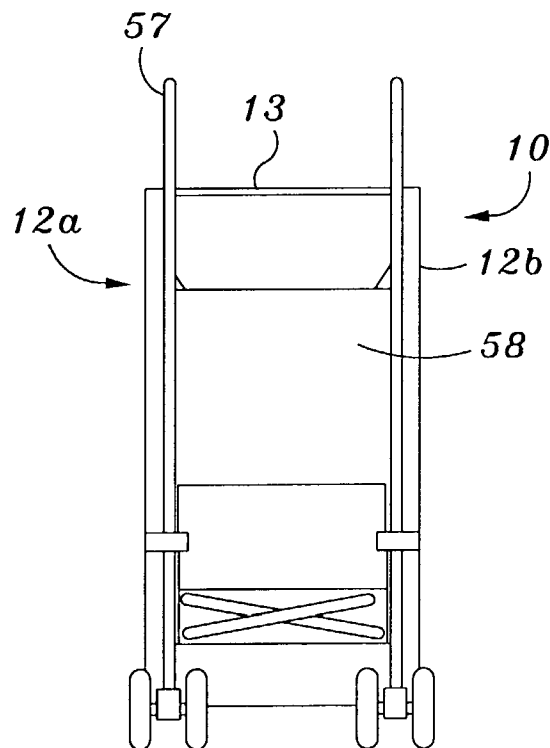


FIG. 16

PORTABLE SHADE**CROSS-REFERENCE TO RELATED APPLICATIONS**

[0001] This application claims the benefit of U.S. Provisional Application No. 60/347,810, filed Nov. 6, 2001.

STATEMENT RE: FEDERALLY SPONSORED RESEARCH/DEVELOPMENT

[0002] (Not Applicable)

BACKGROUND OF THE INVENTION

[0003] The present invention generally relates to portable shades, and more specifically relates to portable shades that can be quickly and easily converted between a folded, compact state and an unfolded, deployed state with minimum effort.

[0004] It is widely known that sunlight can injure people in several ways. For instance, a person's exposed, unprotected skin be sunburned, or a person can burn themselves on objects left exposed to the sun's heat.

[0005] These hazards are especially appreciated by parents with small children. For example, a car seat left in a hot car for hours can reach extremely high temperatures, and placing a small child on such a hot seat can upset and possibly injure the child. Likewise, a child can get a sunburn when transported outside in a stroller. Since parents are typically in charge of the welfare of their small children, parents usually take steps to protect children from the harmful effects of the sun.

[0006] To this end, some parents currently use a shade to protect a child from the effects of the sun. For instance, when transporting a child in a stroller, such a shade is positioned over the cradle-area of the stroller. These shades are typically made of sun-blocking material which is supported by rigid frames. However, prior art shades are not collapsible or are only partially collapsible (i.e., the material collapses, but the frame members remain in their original, rigid configuration). Thus, these shades can be inconvenient, bulky, and difficult to transport. Therefore, it is appreciated that there is a need for a shade that is collapsible and portable.

BRIEF SUMMARY OF THE INVENTION

[0007] In response to the aforementioned needs, there is disclosed herein a collapsible shade adapted to partially block sunlight, wind and/or rain and capable of being easily positioned in both a deployed and collapsed configuration. The shade includes a first and second side panel joined by an unsupported intermediate sheet. In one embodiment, the first and second side panels and the intermediate sheets are made of a reflective material. The first and second side panel as well as the intermediate sheet are all made out of a flexible material. The shade also includes a first resilient frame member which is fastened to the first side panel and a second resilient frame member which is fastened to the second side panel. Both frame members are adapted so as to unfurl the respective side panel and hold it in tension when the shade is in the deployed configuration. The frame members are also each capable of being twisted into at least one loop when the shade is in the collapsed configuration, and the looped frame members are overlaid when the shade is in the collapsed configuration.

[0008] In one aspect, the shade is adapted to be removably attached to a child car seat. As such, the shade can inhibit the surface temperature of the car seat from rising and preferably prevent a child from being exposed to high surface temperatures on the seat. Also, due to the resilient frame members, the user can quickly deploy the shade for use on the car seat and can quickly collapse the shade for more convenient movement and storage.

[0009] In another aspect, the shade is adapted to be removably attached to a stroller. A portion of the first side panel and second side panel includes a mesh section, which allows ventilation through the shade device, and in one embodiment, the intermediate sheet additionally includes a mesh section for added ventilation. In one embodiment, the first side panel, second side panel, and intermediate sheet are made out a waterproof material. Also, the shade includes straps that can be removably secured to the stroller to prevent the shade from inadvertently falling from the stroller. Also, a portion of the intermediate sheet includes a section of transparent material which a user may see through while pushing the stroller. In one embodiment, the shade includes a front flap which freely extends off of the front of the intermediate sheet for more coverage and protection of the stroller occupant. Similarly, the shade includes a back flap which freely extends off of the back of the intermediate sheet for added coverage and protection of the stroller occupant. As such, the shade can shield the occupant from sunlight, high winds, insects, inclement weather, and the like. Also, due to the resilient frame members, the user can quickly deploy the shade for use on the car seat and can quickly collapse the shade for more convenient movement and storage.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] These as well as other features of the present invention will become more apparent upon reference to the drawings wherein:

[0011] **FIG. 1** is a front, perspective view of a portable shade device of the present invention;

[0012] **FIG. 2** is a front view of the shade device of **FIG. 1**;

[0013] **FIG. 3** is a right side view of the shade device of **FIG. 1**, the left side being a mirror image thereof;

[0014] **FIG. 4** is a rear view of the shade device of **FIG. 1**;

[0015] **FIG. 5** is a side view of the portable shade device of **FIG. 1**, positioned atop a conventional car-seat;

[0016] **FIG. 6A** is a front, perspective view of the portable shade device of **FIG. 1**, illustrating a manner in which the shade device can be collapsed;

[0017] **FIG. 6B** is a front, perspective view of the shade device of **FIG. 1** shown in a partially collapsed state;

[0018] **FIG. 6C** is a detail view of the shade device of **FIG. 1**, illustrating a grip used to fully collapse the shade device;

[0019] **FIG. 6D** is a detail view of the shade device of **FIG. 1**, illustrating a grip used to fully collapse the shade device;

[0020] FIG. 6E is a perspective view of the shade device of FIG. 1, shown in its collapsed configuration;

[0021] FIG. 7 is a front, perspective view of another embodiment of a portable shade device of the present invention;

[0022] FIG. 8 is a front view of the shade device of FIG. 7;

[0023] FIG. 9 is a side view of the shade device of FIG. 7;

[0024] FIG. 10 is a side view of the shade device of FIG. 7 positioned atop a conventional stroller;

[0025] FIG. 11 is a rear view of the shade device of FIG. 7 positioned atop a conventional stroller;

[0026] FIG. 12 is a front, perspective view of another embodiment of a portable shade device of the present invention;

[0027] FIG. 13 is a front view of the shade device of FIG. 12;

[0028] FIG. 14 is a side view of the shade device of FIG. 12;

[0029] FIG. 15 is a side view of the shade device of FIG. 12, shown positioned over a stroller;

[0030] FIG. 16 is back view of the shade device of FIG. 12, shown positioned over a stroller.

DETAILED DESCRIPTION OF THE INVENTION

[0031] Referring now to the drawings wherein the showings are for purposes of illustrating preferred embodiments of the present invention only, and not for purposes of limiting the same, FIGS. 1-4 illustrate one embodiment of a collapsible shade device 10 of the present invention. As shown, the device 10 includes two side panels 12a, 12b. Each side panel 12a, 12b is flat and generally triangular in shape so as to define a first edge 97a, 97b, a second edge 98a, 98b, a third edge 99a, 99b, a first corner 30a, 30b, a second corner 31a, 31b, and a third corner 32a, 32b, respectively. In the embodiment shown, the first, second, and third corners 30a-32b are rounded. In the preferred embodiment, the side panels 12a, 12b are made out of collapsible, reflective material capable of blocking sunlight. For example, in one embodiment, the side panels 12a, 12b are made out of SPF 50 nylon, although other cloth materials, flexible plastic sheets, or woven materials could alternatively be used without departing from the spirit of the invention.

[0032] Also, the device 10 comprises an intermediate sheet 13. In one embodiment, the intermediate sheet 13 is a flat sheet and is rectangular in shape so as to define a front edge 22, a rear edge 26, and opposing side edges 18a, 18b. Preferably, the intermediate sheet 13 is made out of collapsible, reflective material capable of blocking sunlight, such as SPF 50 nylon. In the embodiment shown, the intermediate sheet 13 extends between and attaches the side panels 12a, 12b such that the intermediate sheet 13 is generally perpendicular to the side panels 12a, 12b. More specifically, in one embodiment, the side edges 18a, 18b of the intermediate sheet 13 are attached along the second edges 98a, 98b and

third edges 99a, 99b of the side panels 12a, 12b. In one embodiment, the intermediate sheet 13 is attached along substantially the entire length of the second edges 98a, 98b, but is attached along only a portion of the length of the third edges 99a, 99b of the side panels 12a, 12b. Furthermore, in the preferred embodiment, attachment of the intermediate sheet 13 to the side panels 12a, 12b is achieved by sewing methods widely known in the art.

[0033] It is noted that attachment of the intermediate sheet 13 to the side panels 12a, 12b in the manner described above defines a cavity 28. In other words, the cavity 28 is defined by the side panels 12a, 12b and the intermediate sheet 13, and in the embodiment shown, an opening 29 (i.e., the space between the first edges 97a, 97b and a portion of the third edges 99a, 99b) provides access to the cavity 28.

[0034] Additionally, the preferred embodiment of the device 10 comprises channels 16a, 16b. In one embodiment, each channel 16a, 16b is an enclosed passage formed by folding and sewing extra material over the edges 97a-99b of the side panels 12a, 12b. Each channel 16a, 16b continuously extends around the first, second, and third edges 97a-99b of the side panels 12a, 12b, respectively.

[0035] As shown in FIGS. 1-4, the device 10 further comprises frame members 14a, 14b. In one embodiment, the frame members 14a, 14b are made out of a long, rod-like, flexible and resilient material. In the embodiment shown, the frame members 14a, 14b are continuous and triangularly shaped and are positioned within respective channels 16a, 16b. In one embodiment, the frame members 14a, 14b are made out of stainless steel; however, other embodiments are made out of other lightweight metals or polymer materials without departing from the spirit of the invention. As will be described in greater detail below, the frame members 14a, 14b allow the device to be quickly and easily articulated in either a deployed configuration (shown in FIGS. 1-4) or a collapsed, stowed configuration (shown in FIG. 6E). More specifically, the frame members 14a, 14b exhibit sufficient structural memory/rigidity to unfurl the side panels 12a, 12b and retain the side panels 12a, 12b in tension when the device 10 is in the deployed configuration. However, the frame members 14a, 14b are also flexible enough such that the frame members 14a, 14b can be twisted and laid over each other so as to resemble a relatively small coil. Thus, the frame members 14a, 14b provide proper support to unfurl the first and second side panels 12a, 12b, and yet the frame members 14a, 14b allow the device 10 to be collapsed for convenience and portability. Also, in the preferred embodiment, the resilience of the frame members 14a, 14b causes each to move from its coiled state to its free state on its own in a relatively short time. As such, the device 10 can be deployed easily and quickly.

[0036] It is noted that some prior art devices include resilient frame members of the type described hereinabove. For instance, U.S. Pat. No. 5,964,533 to Ziglar, U.S. Pat. No. 5,816,279 to Zheng, and U.S. Pat. No. 5,971,188 to Kellogg et al. each include frame members that can be quickly changed between a deployed configuration and a collapsed configuration. Thus, these patents are incorporated in their entirety by reference.

[0037] Moreover, in one embodiment, the device 10 includes a strap 19. The strap is an elastic band that is attached to the first edge 97a of the side panel 12a in the

embodiment shown; however, the strap **19** could be attached to any of the edges **97a-99b** without departing from the spirit of the invention. As will be described in greater detail below, the strap **19** retains the frame members **14a, 14b** in their collapsed configuration for more convenient portability of the device.

[0038] Turning now to **FIG. 5**, the device **10** is shown in operation. As illustrated, the device **10** is positioned over a conventional car seat **21**. More specifically, the device **10** is positioned such that the car seat **21** resides in the cavity **28** of the device **10**. In the preferred embodiment, the car seat **21** is wide enough such that the device **10** frictionally fits over the car seat **21** and the device **10** remains upright and in place. However, the device **10** can be propped up by external means such as a car door (not shown) if the car seat **21** is too narrow for a frictional fit. Thus, the device **10** reflects sunlight away from the car seat **21** to thereby inhibit the surface temperature of the car seat **21** from rising. Advantageously, after the device **10** is removed, the child can be placed within the car seat **21** and is less likely to be harmed by the surface temperature of the car seat **21**.

[0039] Turning now to **FIGS. 6A through 6E**, a process of moving the device **10** from a deployed configuration (**FIG. 6A**) to a collapsed configuration (**FIG. 6E**) is illustrated. Referring initially to **FIG. 6A**, the side panels **12a, 12b** are moved toward each other (as represented by the arrows in **FIG. 6A**) until they touch each other. This causes the intermediate sheet **13** to gather and become folded and disposed between the side panels **12a, 12b**.

[0040] Next, as shown in **FIGS. 6B-6D**, a user grabs the second corners **31a, 31b** with one hand **33** and the third corners **32a, 32b** with another hand **33**. Then the hands **33** are counter-rotated in a twisting motion as indicated by the circular arrows in **FIG. 6B**. This causes the frame members **14a, 14b** to each coil upon itself, resulting in further collapse of the device **10**. As the hands **33** are brought further together, the coiled frame members **14a, 14b** arrange themselves atop one another until the device **10** reaches its collapsed configuration represented in **FIG. 6E**.

[0041] At this point, the strap **19** can be stretched over the device **10**, to inhibit the device **10** from inadvertently becoming uncoiled. In another embodiment in which the strap **19** is not included, the collapsed device **10** is stored in a bag (not shown), and the bag inhibits the device **10** from inadvertently moving from the collapsed configuration to the deployed configuration.

[0042] It is understood that when the device **10** is in the collapsed configuration, it is relatively compact. This compactness, in addition to the lightweight materials used, advantageously allows for more convenient transport and stowing of the device **10**.

[0043] When the user wishes to deploy the device **10**, the user either removes the strap **19** from over the device **10** or removes the device from its storage bag. Then, due to the resiliency, i.e. structural memory, of the frame members **14a, 14b**, the frame members **14a, 14b** uncoil and return to their generally triangular shape. As the frame members **14a, 14b** uncoil, they cause the side panels **12a, 12b** to unfurl. Preferably, the frame members **14a, 14b** uncoil instantaneously and automatically for added convenience.

[0044] Turning now to **FIGS. 7 through 9**, an alternative embodiment of the device **10** is illustrated. The device **10**

shown is similar to the device **10** described above in relation to **FIGS. 1 through 6E** with differences that will be discussed in more detail below. The device **10** pictured is adapted to be fit over a conventional stroller to protect the child-occupant from sunlight, strong gusts of wind, rain, insects, and the like. Also, the device **10** is also adapted to allow the child-occupant to see out from inside the stroller and to provide ventilation for the child-occupant of the stroller.

[0045] In the embodiment shown, the side panels **12a, 12b** are polygonal in shape so as to define a top edge **42a, 42b**, a bottom edge **47a, 47b**, a front edge **43a, 43b**, a rear edge **45a, 45b**, a first corner **100a, 100b**, a second corner **101a, 101b**, a third corner **102a, 102b**, and a fourth corner **103a, 103b**. In the embodiment shown, the corners **100a-103b** are all rounded.

[0046] Like the side panels **12a, 12b** discussed above in relation to **FIGS. 1 through 6E**, the side panels **12a, 12b** of the device **10** shown in **FIGS. 7 through 9** are made out of collapsible material. However, the side panels **12a, 12b** include a solid section **106** and a mesh section **108**. The solid section **106** is made out of a material that is reflective and generally impervious to air flow, such as SPF 50 Nylon. In other embodiments, other cloth materials, flexible plastic sheets, or woven materials are alternatively used without departing from the spirit of the invention. In the embodiment shown, the solid section **106** is generally triangular and is positioned adjacent the third corner **102a, 102b** of the respective side panel **12a, 12b**. The mesh section **108** is also made out of a material that is reflective, but the mesh section **108** comprises a plurality of small holes through which air may pass. In one embodiment, the mesh section **108** is made out of a nylon mesh material. The mesh section **108** is generally triangular and is positioned adjacent the first corner **100a, 100b** of the respective side panel **12a, 12b**. The mesh section **108** is attached to the solid section **106** at an intersection edge **110**, which generally extends between the second corner **101a, 101b** and fourth corner **103a, 103b**, respectively. In the preferred embodiment, the mesh section **108** is attached to the solid section **106** at the intersection edge **110** via a sewing process widely known in the art.

[0047] As shown in **FIGS. 7 through 9**, the device **10** includes an intermediate sheet **13**, similar to the intermediate sheet **13** described above in relation to **FIGS. 1 through 6E**; however, in this alternative embodiment, the intermediate sheet is attached to the side panels **12a, 12b** respectively along the front edges **43a, 43b** and the top edges **42a, 42b**. In one embodiment, the intermediate sheet **13** is attached along the front edges **43a, 43b** and the top edges **42a, 42b** via a sewing process widely known in the art.

[0048] As shown in **FIGS. 7 and 9**, attachment of the intermediate sheet **13** to the top edges **42a, 42b** terminates adjacent the third corners **102a, 102b**. However a length of the intermediate sheet **13** extends therefrom, unattached to either side panel **12a, 12b** so as to define a rear flap **58**. Since the rear flap **58** is not attached to either side panel **12a, 12b**, the rear flap **58** can be positioned between the side panels **12a, 12b** (shown in **FIG. 7**) or be pivoted so as to extend parallel from the top edges **42a, 42b** (shown in **FIG. 9**).

[0049] In the preferred embodiment, the intermediate sheet **13** also includes a solid section **106** and a mesh section **108** much like the side panels **12a, 12b** as described above.

In the embodiment shown, the solid section 106 generally extends between the second corners 101a, 101b and the third corners 102a, 102b, and the entire rear flap 58 is also a solid section 106. The mesh section 108 extends generally between the first corners 100a, 100b and the second corners 101a, 101b. As before, the mesh section 108 is attached to the solid section 106 via a sewing process widely known in the art.

[0050] In the embodiment shown, the device 10 includes a rectangular opening 112 in the intermediate sheet 13 approximately half way between the side panels 12a, 12b and adjacent the third corners 102a, 102b. In the preferred embodiment, an observation window 56 covers the opening 112. In one embodiment, the observation window 56 is made out of a transparent material, such as transparent vinyl, and is attached to the intermediate sheet 13 via a sewing process widely known in the art. As will be described in greater detail below, when the device 10 is positioned on a stroller, a user can conveniently see inside the stroller through the observation window 56 while pushing and without having to remove the device 10.

[0051] Like the device 10 described above in relation to FIGS. 1 through 6E, the device 10 shown in FIGS. 7 through 9 includes channels 16a, 16b through which flexible, resilient frame members 14a, 14b are routed, and the frame members 14a, 14b unfurl the side panels 12a, 12b when the device 10 is in the deployed configuration. Also, the frame members 14a, 14b of the device 10 shown in FIGS. 7 through 9 are capable of being flexed, coiled, and folded so as to change the device 10 into the collapsed configuration. The procedure described in relation to FIGS. 6A through 6E, is also used to collapse the device 10 shown in FIGS. 7 through 9, except that a user grips the first corners 100a, 100b and third corners 102a, 102b to complete the procedure. As before, the resiliency of the frame members 14a, 14b advantageously allow a user to more conveniently store and transport the device 10 when not in use as a shade.

[0052] In the preferred embodiment, the device 10 further includes a plurality of straps 46. In one embodiment, each of the straps 46 includes hook tape and loop tape (e.g., VEL-CRO™), and the hook and loop tape removably attach together. In the embodiment shown, the device 10 includes three straps 46 on each side panel 12a, 12b, wherein one strap 46 is attached to the bottom edges 47a, 47b at an intermediate location, another strap 46 is attached adjacent the fourth corners 103a, 103b, and a third strap 46 is attached to the rear edges 45a, 45b at an intermediate location. As will be discussed in greater detail below, the straps 46 can be secured to the stroller to thereby inhibit the device 10 from inadvertently falling from the stroller.

[0053] Turning now to FIGS. 10 and 11, the device 10 is shown in its deployed configuration, attached to a stroller 57. As shown, the side panels 12a, 12b are frictionally fit over the outside of the stroller 57. Also, the straps 46 are attached to the stroller 57 in order to further secure the device 10 thereto. More specifically, the hook tape portion of each strap 46 is looped around a portion of the stroller 57, and the loop tape portion of the corresponding strap 46 is pressed against the hook tape. As such, a portion of the stroller 57 is encircled by the strap 46 for more secure holding of the device 10 onto the stroller 57.

[0054] Furthermore, the rear flap 58 is stretched out over the outside of the back of the stroller 57 so that the rear flap 58 provides shade to the back of the child occupant of the stroller 57. In one embodiment, the rear flap 58 includes an area of either pile or loop tape (not shown) which attaches to a strap 46 on the side panels 12a, 12b so that the rear flap 58 remains secured in place.

[0055] Thus, when the device 10 embodied in FIGS. 7 through 11 is placed over a stroller, the device 10 provides shade, protects from strong gusts of wind, protects from insects, and the like. It is noted that the configuration of the device 10 allows for nearly complete enclosure of the child-occupant within the stroller 57 for greater protection. Also, the mesh sections 108 allows for ventilation within the stroller and allows the occupant to see outwardly therefrom. Moreover, the person pushing the stroller can see into the stroller through the observation window 56 while pushing, thereby ensuring that the child-occupant is safe and secure. Additionally, the straps 46 secure the device 10 to the stroller 57 such that the device 10 is less likely to inadvertently fall therefrom and expose the child-occupant. Finally, the resilient frame members 14a, 14b allow the device 10 to be quickly changed between a deployed configuration, and a collapsed configuration for more convenient movement and storage.

[0056] Turning now to FIGS. 12 through 16, an alternative embodiment of the device 10 is shown. This embodiment of the device 10 is similar to the device 10 discussed above in relation to FIGS. 7 through 11; however, this embodiment is adapted to provide shelter from the sun as well as inclement weather.

[0057] As shown, less surface area of the device 10 is made up of mesh sections 106 as compared to the device 10 illustrated in FIGS. 7 through 11. For instance, in the embodiment shown, the mesh sections 106 are relatively small and triangular and included only on the side panels 12a, 12b, adjacent the second corners 102a, 102b. Also, the intermediate sheet 13 includes no mesh section 108. Since only a small portion of the device 10 includes a mesh section 108, the device 10 is more likely to protect the child-occupant from sunlight or inclement weather. However, the mesh section 108, though relatively small, still allows for adequate ventilation.

[0058] Furthermore, the solid sections 106 are made of a waterproof material, such as nylon or polyvinyl chloride (PVC). As such, the device is more likely to keep the child-occupant dry, even if the stroller is used during inclement weather.

[0059] As shown in FIGS. 12 through 16, the device 10 includes a front flap 150. In the embodiment shown, a portion of the intermediate sheet 13 freely extends past the first corners 100a, 100b of the side panels 12a, 12b so as to define a front flap 150. The front flap 150 extends as such so as to provide more coverage of the child-occupant when seated in the stroller 57. Thus, the front flap 150 provides increased protection from the sunlight and inclement weather.

[0060] Moreover, the device 10 illustrated in FIGS. 12 through 16 include resilient frame members 14a, 14b attached around the periphery of the side panels 12a, 12b. As stated above, the frame members 14a, 14b can be bent and

folded so as to change the device **10** into the collapsed configuration for more convenient movement and storage, and the frame members **14a**, **14b** are resilient and quickly return to their original shape so as to unfurl the side panels **12a**, **12b**, such that the device **10** quickly moves to its deployed configuration.

[0061] As shown in **FIGS. 15 and 16**, the device **10** can be positioned over the outside of a stroller **57** to protect the child-occupant from sunlight or inclement weather. The straps **46** can be used to attach the device **10** to the stroller **57** so that the device **10** does not inadvertently fall from the stroller **57**. Also, it is noted that the front flap **150** extends substantially below the passenger area of the stroller **57**, thereby further enclosing the child-occupant and providing increased protection to the child-occupant.

[0062] This disclosure provides exemplary embodiments of the present invention. The scope of the present invention is not limited by these exemplary embodiments. Numerous variations, whether explicitly provided for by the specification or implied by the specification, such as variations in structure, dimension, type of material and manufacturing process may be implemented by one of skill in the art in view of this disclosure.

What is claimed is:

1. A collapsible shade adapted to partially block sunlight and capable of being positioned in both a deployed and collapsed configuration, the shade comprising:

- a first and second side panel joined by an unsupported intermediate sheet, wherein the first side panel, second side panel, and intermediate sheet are made of a flexible material;
- a first resilient frame member fastened to the first side panel, the first resilient frame member adapted so as to unfurl the first side panel and hold the first side panel in tension when the shade is in the deployed configuration, the first resilient frame member also capable of being bent into at least one loop when the shade is in the collapsed configuration; and
- a second resilient frame member fastened to the second side panel, the second resilient frame member adapted so as to unfurl the second side panel and hold the second side panel in tension when the shade is in the deployed configuration, the second resilient frame member also capable of being bent into at least one loop when the shade is in the collapsed configuration;

wherein the looped first frame member at least partially overlays the looped second frame member when the shade is in the collapsed configuration.

2. The shade of claim 1, wherein the intermediate sheet can be arranged generally perpendicular to the first and second side panels when the shade is in the deployed configuration.

3. The shade of claim 1, wherein at least a portion of the first side panel, second side panel, and intermediate sheet are each made of reflective material.

4. The shade of claim 1, further comprising a strap attached to the first side panel, the strap capable of retaining the resilient frame members in overlaid loops so as to maintain the shade in the collapsed configuration.

5. The shade of claim 1, adapted to removably attach to a child car-seat.

6. The shade of claim 1, adapted to removably attach to a stroller.

7. The shade of claim 6, wherein at least a portion of the first side panel and the second side panel each comprise a mesh material.

8. The shade of claim 7, wherein at least a portion of the intermediate sheet comprises a mesh material.

9. The shade of claim 6, further comprising a plurality of straps individually attached to the first and second side panels, the straps capable of removably securing the shade to the stroller.

10. The shade of claim 9, wherein the straps comprise hook and loop fastening tape, the straps capable of removably securing the shade to the stroller.

11. The shade of claim 1, wherein at least a portion of the first side panel, second side panel, and intermediate sheet each comprise SPF 50 nylon.

12. The shade of claim 6, wherein at least a portion of the intermediate sheet is made of a transparent material.

13. The shade of claim 1, wherein the first and second side panels each comprise a top edge, a front edge extending at an angle from the top edge, and a bottom edge extending at an angle from the front edge, and at least a portion of the intermediate sheet is attached to the respective top edges of the first and second side panels, and at least a portion of the intermediate sheet is attached to the respective front edges of the first and second side panels.

14. The shade of claim 13, further comprising a front shield which is attached to the intermediate sheet and freely hangs below respective bottom edges of the first and second side panels.

15. The shade of claim 13, wherein the first and second side panels further comprise a rear edge connecting the top edge to the bottom edge on the first and second side panels, respectively, and wherein the shade also comprises a rear flap made of flexible material which is attached to the intermediate sheet and freely extends downwardly therefrom between respective rear edges of the first and second side panels.

16. The shade of claim 1, wherein the first and second frame members are made of stainless steel.

17. The shade of claim 6, wherein the first side panel, the second side panel, and the intermediate sheet are at least partially made of a waterproof material.

18. The shade of claim 17, wherein the waterproof material is selected from a group consisting of polyvinyl chloride and nylon.

19. A method of attaching a collapsible shade to a car seat that has an outer surface, the shade comprising:

- a first side panel supported by a resilient first frame member;
- a second side panel supported by a resilient second frame member; and
- an unsupported intermediate sheet that attaches the first side panel to the second side panel;

the shade capable of being changed between a collapsed configuration, wherein the first and second frame members are bent into overlapping coils, and a deployed configuration, wherein the first and second frame members unfurl the first and second side panels respectively; the method comprising:

changing the shade from a collapsed configuration to a deployed configuration; and

fitting the shade over the outside surface of the car seat.

20. A method of attaching a collapsible shade to a stroller that has an outer surface, the shade comprising:

a first side panel supported by a resilient first frame member;

a second side panel supported by a resilient second frame member; and

an unsupported intermediate sheet that attaches the first side panel to the second side panel;

the shade capable of being changed between a collapsed configuration, wherein the first and second frame mem-

bers are bent into overlapping coils, and a deployed configuration, wherein the first and second frame members unfurl the first and second side panels respectively; the method comprising:

changing the shade from a collapsed configuration to a deployed configuration; and

fitting the shade over the outside surface of the stroller.

21. The method of claim **20**, wherein the first and second side panels further comprise a plurality of straps capable of removably securing the shade to the stroller, and the method further comprises the step of removably securing the straps to the stroller.

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