A releasable clip for a shade is provided having an eyelet through which a cord can be strung and a retention member coupled to the eyelet, where the retention member is configured to receive a ring of a shade. The retention member can be structured to releasably secure the shade ring and release the shade ring upon the application of a predetermined amount of force.
Figure 10
RELEASABLE CLIP FOR A SHADE

CROSS REFERENCE TO RELATED APPLICATIONS


FIELD OF THE INVENTION

[0002] This invention relates generally to window coverings, and more particularly to a release mechanism for roman shade lift cords.

BACKGROUND

[0003] Window coverings, such as shades or blinds, typically have a horizontal or vertical covering to prevent sunlight from entering an area and to retain privacy. The covering, which is commonly in the form of slats or pleats, can hang vertically in the case of a vertical covering, or can extend horizontally from a headrail in the case of a horizontal covering. Many window coverings also include a bottom rail as well.

[0004] In order to raise and lower the bottom rail relative to the floor, a looped cord extends from a point along the bottom rail through the slats and into the headrail. Two or more cords are often provided to raise or lower the window covering evenly. The window covering is raised or lowered by pulling or releasing the accessible portion of the cords. Inventions directed to minimizing or eliminating the possibility of entanglement in the cords are provided in U.S. Pat. Nos. 5,577,543, 6,044,523, 5,562,140 and 6,431,248. Nevertheless, there is still a need in the art for an apparatus that reduces the dangers associated with cords on window blinds.

SUMMARY OF THE INVENTION

[0005] A releasable clip, in accordance with an exemplary embodiment of the present invention, provides a safety feature of a releasable arrangement should a user, such as an infant, become entangled with a closed loop of a lift cord of a window shade, such as a roman window shade. The releasable clip for a shade can be included with new roman window shade kits or can be retro-fit to existing window shade kits. In addition, the releasable clip is designed such that it can be used with any roman window shade.

[0006] In an exemplary embodiment, a releasable clip for a shade is provided having an eyelet through which a cord can be strung and a retention member coupled to the eyelet, where the retention member is configured to receive a ring of a shade. The retention member can be structured to releasably secure the shade ring and release the shade ring upon the application of a predetermined amount of force.

[0007] In another exemplary embodiment, a releasable clip for a shade is provided having an attachment member operable for coupling to an attachment means of the shade; and a retention member coupled to the attachment member, the retention member configured to receive a ring which a cord can be strung through. The retention member can be structured to releasably secure the ring and release the ring upon the application of a predetermined amount of force.

[0008] In yet another exemplary embodiment, a releasable clip for a shade is provided having a first retention member operable for coupling to an attachment means of the shade and a second retention member coupled to the first retention member. The second retention member is configured to receive a ring which a lift cord can be strung through. Additionally, the second retention member is structured to releasably secure the ring and release the ring upon the application of a predetermined amount of force.

[0009] The above features and advantages of the present invention will be better understood with reference to the following figures and detailed description. It should be appreciated that the particular devices and methods illustrating the present invention are exemplary only and not to be regarded as limitations of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] There are presently shown in the drawings embodiments which are presently preferred, it being understood, however, that the invention is not limited to the precise arrangements and instrumentalties shown.

[0011] FIG. 1 is an embodiment of a releasable clip for a shade in accordance with the present invention;

[0012] FIG. 2 shows the embodiment of FIG. 1 prior to engagement with a window shade ring;

[0013] FIG. 3 shows the embodiment of FIG. 1 engaged with a window shade;

[0014] FIG. 4 is a view of a plurality of releasable clips in exemplary use with a window shade;

[0015] FIG. 5 is another embodiment of a releasable clip for a shade in accordance with the present invention;

[0016] FIG. 6 shows the embodiment of FIG. 5 prior to engagement with a window shade;

[0017] FIG. 7 shows the embodiment of FIG. 7 engaged with a window shade;

[0018] FIG. 8 is a cross-sectional view of the embodiment shown in FIG. 3 taken along line 5-5;

[0019] FIG. 9 is a view of a plurality of releasable clips in exemplary use with a window shade;

[0020] FIG. 10 is yet another embodiment of a releasable clip for a shade in accordance with the present invention;

[0021] FIG. 11 shows the embodiment of FIG. 10 prior to engagement with a window shade;

[0022] FIG. 12 shows the embodiment of FIG. 10 engaged with a window shade; and

[0023] FIG. 13 shows a side view of the embodiment of FIG. 10.

DETAILED DESCRIPTION

[0024] While the specification concludes with claims defining the features of the embodiments that are regarded as novel, it is believed that the releasable clips for a shade, and other embodiments will be better understood from a consideration of the following description in conjunction with the drawing figures, in which like reference numerals are carried forward.

[0025] As required, detailed embodiments of the releasable clips for a shade are disclosed herein. However, it is to be understood that the disclosed embodiments are merely exemplary, which can be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in
the art to variously employ the embodiments of the present invention in virtually any appropriately detailed structure. Further, the terms and phrases used herein are not intended to be limiting but rather to provide an understandable description of the embodiments herein.

[0026] The terms "a" or "an," as used herein, are defined as one or more than one. The phrase "at least one of" as used herein, is defined as one or more than one. The term "another," as used herein, is defined as at least a second or more. The terms "including" and/or "having," as used herein, are defined as comprising (i.e., open language).

[0027] The releasable clip for a shade described herein provides a safety feature of a releasable arrangement should a user become entangled with a lift cord of a window shade, such as a roman window shade. The releasable clip for a shade can be included with new window shade kits or can be retro-fit to existing window shade kits.

[0028] Referring now to FIGS. 1-3 which illustrate a releasable clip 100 for a shade, such as a roman shade for a window. The releasable clip 100 includes an eyelet 110 and a retainer member 120. The eyelet 110 can be any appropriate shape, such as annular with an open space 130, or for operating with pull and/or lift cords associated with a shade. In one embodiment, the eyelet 110 is a closed shape, but the present disclosure contemplates using an open structure, such as having a slot therein, or a structure that can be opened and closed. Pull and/or lift cords used to operate a shade can be strung through or otherwise operably engaged with the open space 130 of eyelet 110.

[0029] The eyelet 110 can be constructed of any suitable material, such as plastic, metal, ceramic, nylon and combinations thereof. As shown in FIG. 1, the releasable clip 100, including the eyelet 110 and a retainer member 120, can be a unibody apparatus and can be constructed of the same materials listed above. Although, the present disclosure contemplates a modular construction as well, such as the eyelet 100 and member 120 being removable connected with each other.

[0030] In exemplary embodiments, the retainer member of 120 of the releasable clip 100 can be dimensioned and constructed to releasably secure a ring connected to a window shade. The retainer member 120 can be annular in shape and form a partial ring or a portion of a ring. Even though the partial ring or the portion of the ring does not form an uninterrupted ring, the retainer member 120 can have a diameter of a distance L1. The partial ring can terminate in opposing ends 140a and 140b that are separated by a distance L2. The retainer member 120 can be constructed and dimensioned such that the distance L2 between the opposing ends 140a and 140b is less than the distance L1.

[0031] Additionally, the internal surface 150 of the partially ring shaped retainer member 120 may form a groove or channel 160. The groove 160 can extend from opposing end 140a to opposing end 140b or can be formed in only a portion of the internal surface 150. The groove 160 can be shaped with a curvature to match the curvature of a shade ring to be secured with the partially ring shaped retainer member 120. However, other corresponding cross-sectional shapes can also be utilized.

[0032] Furthermore, at least the partially ring shaped retainer member 120 of the releasable clip 100 may be formed of a flexible material, such as plastic, that allows the retainer member 120 to flex during insertion of the shade ring to be secured and that returns the retainer member 120 to an unflexed position. In use, and as shown in FIG. 4, multiple releasable clips 100 can be releasably secured to shade rings 170 of a shade 180, and the lift cord 190 can be strung through or otherwise engaged with the releasable clips 100.

[0033] During installation of the releasable clip 100 with a shade ring 170, and as shown in FIG. 2, the partially ring shaped retainer member 120 can be forced onto the shade ring 170, or in the alternative, the shade ring 170 can be inserted into the partially ring shaped retainer member 120. To secure the shade ring 170 with the partially ring shaped retainer member 120, the opposing ends 140a and 140b can be gently flexed open to widen the distance L2 to a distance that is less than the distance L1 but greater than the diameter of the shade ring 170. When the partially ring shaped retainer member 120 is flexed in this manner, the partially ring shaped retainer member 120 can receive the shade ring 170. Once the shade ring 170 is inserted within the partially ring shaped retainer member 120, the opposing ends 140a and 140b can return to their unflexed position, as shown in FIG. 3. Chamfered or angled edges can be utilized along the member 120 to facilitate the engagement.

[0034] Additionally, and as shown in FIG. 8, the groove 160 of the partially ring shaped retainer member 120 can mattingly receive the shade ring 170 such that a snug or friction fit is formed between the two structures. Such an arrangement of a snug fit will minimize play between the partially ring shaped retainer member 120 and shade ring 170.

[0035] In one exemplary embodiment, as shown in FIG. 3, the shade ring 170 will not be able to be removed from the partially ring shaped retainer member 120 unless a predetermined amount of force is provided to separate the two structures. In one embodiment, the predetermined amount of force can be approximately 3, 4, 5, 6, 7, 8, 9, or 10 lbs or more. Other embodiments may allow for release of the shade ring 170 from the partially ring shaped retainer member 120 upon application of a lesser predetermined amount of force, such as approximately 2.8, 3, 4, 5, 6, 7, 8, 9 or 10 lbs or more. The predetermined amount of force can be varied by adjusting the flexibility of the material of the partially ring shaped retainer member 120. The predetermined amount of force can also be varied by adjusting the distance L2 between the opposing ends 140a and 140b. An increase in the distance L2 between the opposing ends 140a and 140b will decrease the predetermined amount of force while a decrease of the distance L2 between the opposing ends 140a and 140b will increase the predetermined amount of force required to release the shade ring 170 from the partially ring shaped retainer member 120.

[0036] In operation, the partially ring shaped retainer member 120 will release the shade ring 170 when at least the predetermined amount of force is applied. For instance, if an infant weighing 10 lbs becomes entangled in a closed loop created by the lift cords 190, the infant’s own body weight may pull on the lift cord 190 and create a force that exceeds the predetermined force. In such an event, the partially ring shaped retainer member 120 will release the shade ring 170. If the shade includes multiple shade rings 170 secured by partially ring shaped retainer member 120, then each partially ring shaped retainer member 120 will release the shade ring 170 when the force of the infant’s weight is applied to it.

[0037] Turning now to FIGS. 5-7, another exemplary embodiment of a releasable clip 200 is illustrated. The releas-
able clip 200 includes an attachment member 210 and a retainment member 220. The attachment member 210 can be any appropriate shape, such as annular with an open space 230 and a slot 215. The slot 215 is designed to allow a fabric tab, thread loop, or other attachment means of the window shade to be inserted through the slot 215. In exemplary embodiments, the attachment member is constructed of a deformable material, such as plastic, which allows the slot 215 to be enlarged to allow insertion of the attachment means of the window shade by the user. Furthermore, the slot 215 may be designed to prevent the attachment means of the window shade from disengaging from the attachment member without the slot 215 being deformed by a user. The attachment member 210 can be constructed of any suitable material, such as plastic, metal, ceramic, nylon and combinations thereof. As shown in FIG. 5, the releasable clip 200, including the attachment member 210 and a retainment member 220, can be a unibody apparatus. Although, the present disclosure contemplates a modular construction as well, such as the attachment member 210 and the retainment member 220 being removably connectable with each other.

The retainment member of 220 of the releasable clip 200 can be dimensioned and constructed to releasably secure a ring for operating with pull and/or lift cords associated with a shade. The retainment member 220 can be annular in shape and form a partial ring or a portion of a ring. Pull and/or lift cords used to operate a shade can be string through or otherwise operably engaged with a ring releasibly secured by the retainment member 220. Even though the partial ring or the portion of the ring does not form an uninterrupted ring, the retainment member 220 can have a diameter of a distance L1. The partial ring can terminate in opposing ends 240a and 240b that are separated by a distance L2. The retainment member 220 can be constructed and dimensioned such that the distance L2 between the opposing ends 240a and 240b is less than the distance L1.

Additionally, the internal surface 250 of the partially ring shaped retainment member 220 can form a groove or channel 260. The groove 260 can extend from opposing end 240a to opposing end 240b or can be formed in only a portion of the internal surface 250. The groove 260 can be shaped to match the curvature of a ring to be secured with the partially ring shaped retainment member 220. However, other corresponding cross-sectional shapes can also be utilized.

Further, the retainment member 220 can be formed of a flexible material, such as plastic, that allows the retainment member 220 to flex during insertion of the ring to be secured and that returns the retainment member 220 to an unflexed position. In use, and as shown in FIG. 9, multiple releasable clips 200 can be releasably secured to attachment means 225 of a shade 280, and the lift cord 290 can be string through or otherwise engaged with the releasable clips 200 via rings 270.

During installation of the releasable clip 200 with a ring 270, and as shown in FIG. 6, the partially ring shaped retainment member 220 can be forced onto the ring 270, or in the alternative, the ring 270 can be inserted into the partially ring shaped retainment member 220. To secure the ring 270 with the partially ring shaped retainment member 220, the opposing ends 240a and 240b can be gently flexed open to widen the distance L2 to a distance that is less than the distance L1 but greater than the diameter of the ring 270. When the partially ring shaped retainment member 220 is flexed in this manner, the partially ring shaped retainment member 220 can receive the ring 270. Once the ring 270 is inserted within the partially ring shaped retainment member 220, the opposing ends 240a and 240b can return to their unflexed position, as shown in FIG. 7. Chamfered or angled edges can be utilized along the retainment member 220 to facilitate the engagement.

Furthermore, attachment means 225 of the shade is inserted into the attachment member 210 through slot 215. Slot 215 may be flexed to allow insertion of the attachment means 225 and may return to its unflexed position, which prevents attachment means 225 from becoming disengaged from the attachment member 210 during normal use of the shade.

In one embodiment of the secured arrangement shown in FIG. 7, the ring 270 will not be able to be removed from the partially ring shaped retainment member 220 unless a predetermined amount of force is provided to separate the two structures. In another embodiment, the predetermined amount of force can be approximately 3, 4, 5, 6, 7, 8, 9 or 10 lbs or more. Other embodiments may allow for release of the ring 270 from the partially ring shaped retainment member 220 upon application of a lesser predetermined amount of force, such as approximately 2.8, 3, 4, 5, 6, 7, 8, 9 or 10 lbs or more. The predetermined amount of force can also be varied by adjusting the flexibility of the material of the partially ring shaped retainment member 220. The predetermined amount of force can also be varied by adjusting the distance L2 between the opposing ends 240a and 240b. An increase in the distance L2 between the opposing ends 240a and 240b will decrease the predetermined amount of force while a decrease of the distance L2 between the opposing ends 240a and 240b will increase the predetermined amount of force required to release the ring 270 from the partially ring shaped retainment member 220.

In operation, the partially ring shaped retainment member 220 will release the ring 270 when at least the predetermined amount of force is applied. For instance, if an infant weighing approximately 10 lbs or more becomes entangled in a closed loop created by the lift cords 290, the infant’s body weight may pull on the lift cord 290 and create a force that exceeds the predetermined force. In such an event, the partially ring shaped retainment member 220 will release the ring 270. If the shade is in its unsecured position, the partially ring shaped retainment member 220 will release the ring 270 when the force of the infants weight is applied to it.

Turning now to FIGS. 10-13, another exemplary embodiment of a releasable clip 300 for a shade, such as a roman shade for a window, is illustrated. The releasable clip 300 includes a first retainment member 310 and a second retainment member 320. The first and second retainment members 310, 320 can be constructed of any suitable material, such as plastic, metal, ceramic, nylon and combinations thereof. As shown in FIG. 10, the releasable clip 300, including the first retainment member 310 and the second retainment member 320, can be a unibody apparatus and can be constructed of the same materials listed above. Although, the present disclosure contemplates a modular construction as well, such as the first retainment member 310 and the second retainment member 320 being removably connectable with each other.

The first and second retainment members 310, 320 of the releasable clip 300 can be dimensioned and constructed
to releasably secure a ring for operating with pull and/or lift cords associated with a shade. The first and second retention members 310, 320 can be annular in shape and form a partial ring or a portion of a ring. Pull and/or lift cords used to operate a shade can be strung through or otherwise operably engaged with a ring releasable secured by either the first or second retention members 310, 320. Even though the partial ring or the portion of the ring does not form an uninterrupted ring, the first and second retention members 310, 320 can have a diameter of a distance L1. The partial ring can terminate in opposing ends 340a and 340b that are separated by a distance L2. The first and second retention members 310, 320 can be constructed and dimensioned such that the distance L2 between the opposing ends 340a and 340b is less than the distance L1.

[0047] In exemplary embodiments the first and second retention members 310, 320 may have the same dimensions. However, it is recognized that the distances L1 and L2 of the first and second retention members 310, 320 may be different. One of the first and second retention members 310, 320 may be designed such that it receives rings that are used in the production of a specific model of window shades, thereby allowing the releasable clip 300 to be easily used with existing window shades without having to replace the attachment ring of the window shade.

[0048] In exemplary embodiments, an internal surface 350 of at least one of the first and second retention members 310, 320 can form a groove or channel 360. The groove 360 can extend from opposing end 340a to opposing end 340b or can be formed in only a portion of the internal surface 350. The groove 360 can be shaped with a curvature to match the curvature of a ring to be secured with the partially ring shaped first and second retention members 310, 320. However, other corresponding cross-sectional shapes can also be utilized.

[0049] The first and second retention members 310, 320 can be formed of a flexible material, such as plastic, that allows the first and second retention member 310, 320 to flex during insertion of the ring to be secured and that returns the first and second retention members 310, 320 to an unflexed position. During installation of the releasable clip 300 with a rings 370, and as shown in FIG. 11, the partially ring shaped first and second retention members 310, 320 can be forced onto the rings 370, or in the alternative, the rings 370 can be inserted into the partially ring shaped first and second retention members 310, 320. To secure the rings 370 with the partially ring shaped first and second retention members 310, 320, the opposing ends 340a and 340b can be gently flexed open to widen the distance L2 to a distance that is less than the distance L1 but greater than the diameter of the rings 370. When the partially ring shaped first and second retention members 310, 320 are flexed in this manner, the partially ring first and second retention members 310, 320 can receive the rings 370. Once the rings 370 are inserted within the partially ring first and second retention members 310, 320, the opposing ends 340a and 340b can return to their unflexed position, as shown in FIG. 12. Chambered or angled edges can be utilized along the first and second retention members 310, 320 to facilitate the engagement.

[0050] In one embodiment of the secured arrangement shown in FIG. 12, the rings 370 will not be able to be removed from the partially ring shaped first and second retention members 310, 320 unless a predetermined amount of force is provided to separate the two structures. In another embodiment, the predetermined amount of force can be approximately 3, 4, 5, 6, 7, 8, 9 or 10 lbs or more. Other embodiments may allow for release of the rings 370 from the partially ring shaped first and second retention members 310, 320 upon application of a lesser predetermined amount of force, such as approximately 2.8, 3, 4, 5, 6, 7, 8, 9 or 10 lbs or more. The predetermined amount of force can be varied by adjusting the flexibility of the material of the partially ring shaped first and second retention members 310, 320. The predetermined amount of force can also be varied by adjusting the distance L2 between the opposing ends 340a and 340b. An increase in the distance L2 between the opposing ends 340a and 340b will decrease the predetermined amount of force while a decrease of the distance L2 between the opposing ends 340a and 340b will increase the predetermined amount of force required to release the rings 370 from the partially ring shaped first and second retention members 310, 320.

[0051] In operation, the partially ring shaped first and second retention members 310, 320 will release the rings 370 when at least the predetermined amount of force is applied. For instance, if an infant weighing approximately 10 lbs or more becomes entangled in a closed loop created by the lift cords 390, the infant's body weight may pull on the lift cord 390 and create a force that exceeds the predetermined force. In such an event, the partially ring shaped first and second retention members 310, 320 will release the rings 370. If the shade includes multiple rings 370 secured by partially ring shaped first and second retention members 310, 320, then each partially ring shaped first and second retention members 310, 320 will release at least one of the rings 370 when the force of the infant's weight is applied to it.

[0052] In exemplary embodiments, the rings 370 may be constructed of various materials including, but not limited to, plastic or metal. One or more rings 370 may either be packaged with the releasable clip 300 as part of a retrofit fitting kit or may be already in use with an existing window shade. Additionally, the rings 370 may be of different dimensions i.e., one of the rings may have a different diameter, different width, or different cross sectional shape.

[0053] While the invention has been described with reference to an exemplary embodiment, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the invention without departing from the essential scope thereof. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out this invention, but that the invention will include all embodiments falling within the scope of the appended claims.

What is claimed is:
1. A releasable clip for a shade, comprising:
an eyelet through which a cord can be strong; and
a retention member coupled to the eyelet, said retention member configured to receive a ring affixed to the shade;
wherein the retention member is structured to releasably secure the ring and release the ring upon the application of a predetermined amount of force.

2. The releasable clip for a shade according to claim 1, wherein the retention member forms a portion of a ring and is at least partially ring shaped.
3. The releasable clip for a shade according to claim 2, wherein at least a portion of an internal surface of the retainment member forms a groove.

4. The releasable clip for a shade according to claim 2, wherein the retainment member is partially flexible to receive the ring.

5. The releasable clip for a shade according to claim 2, wherein the retainment member terminates with opposing ends, the opposing ends being separated by a distance that is less than a diameter of the retainment member.

6. A releasable clip for a shade, comprising:
   - an attachment member operable for coupling to an attachment means of the shade; and
   - a retainment member coupled to the attachment member, said retainment member configured to receive a ring which a cord can be strung through;
wherein the retainment member is structured to releasably secure the ring and release the ring upon the application of a predetermined amount of force.

7. The releasable clip for a shade according to claim 6, wherein the attachment member comprises a slot operable for coupling said attachment means to said attachment member.

8. The releasable clip for a shade according to claim 7, wherein said attachment member is formed of a flexible material, such that said slot can receive said attachment means.

9. The releasable clip for a shade according to claim 6, wherein the retainment member forms a portion of a ring and is at least partially ring shaped.

10. The releasable clip for a shade according to claim 9, wherein at least a portion of an internal surface of the retainment member forms a groove.

11. The releasable clip for a shade according to claim 9, wherein the retainment member is formed of a flexible material to facilitate receiving the ring.

12. The releasable clip for a shade according to claim 9, wherein the retainment member terminates with opposing ends, the opposing ends being separated by a distance that is less than a diameter of the retainment member.

13. A releasable clip for a shade, comprising:
   - a first retainment member operable for coupling to an attachment means of the shade; and
   - a second retainment member coupled to the first retainment member, said second retainment member is configured to receive a ring which a lift cord can be strung through;
wherein the second retainment member is structured to releasably secure the ring and release the ring upon the application of a predetermined amount of force.

14. The releasable clip according to claim 13, wherein the first retainment member is structured to releasably secure the attachment means of the shade and release the attachment means upon the application of a predetermined amount of force.

15. The releasable clip according to claim 13, wherein the second retainment member forms a portion of a ring and is at least partially ring shaped.

16. The releasable clip according to claim 15, wherein at least a portion of an internal surface of the second retainment member forms a groove.

17. The releasable clip according to claim 16, wherein the second retainment member is formed of a flexible material to facilitate receiving the ring.

18. The releasable clip according to claim 15, wherein the second retainment member terminates with opposing ends, the opposing ends being separated by a distance that is less than a diameter of the second retainment member.

19. The releasable clip according to claim 14, wherein the first retainment member forms a portion of a ring and is at least partially ring shaped.

20. The releasable clip according to claim 19, wherein at least a portion of an internal surface of the first retainment member forms a groove.

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