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(54) **DEVICE FOR PREVENTING LOSS OF A STRING IN AN ARTICLE OF CLOTHING**

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(76) Inventor: **Bernadette Izzo**, Princeton, NJ (US)

(57) **ABSTRACT**

Correspondence Address:
DRINKER BIDDLE & REATH
ATTN: INTELLECTUAL PROPERTY GROUP
ONE LOGAN SQUARE
18TH AND CHERRY STREETS
PHILADELPHIA, PA 19103-6996 (US)

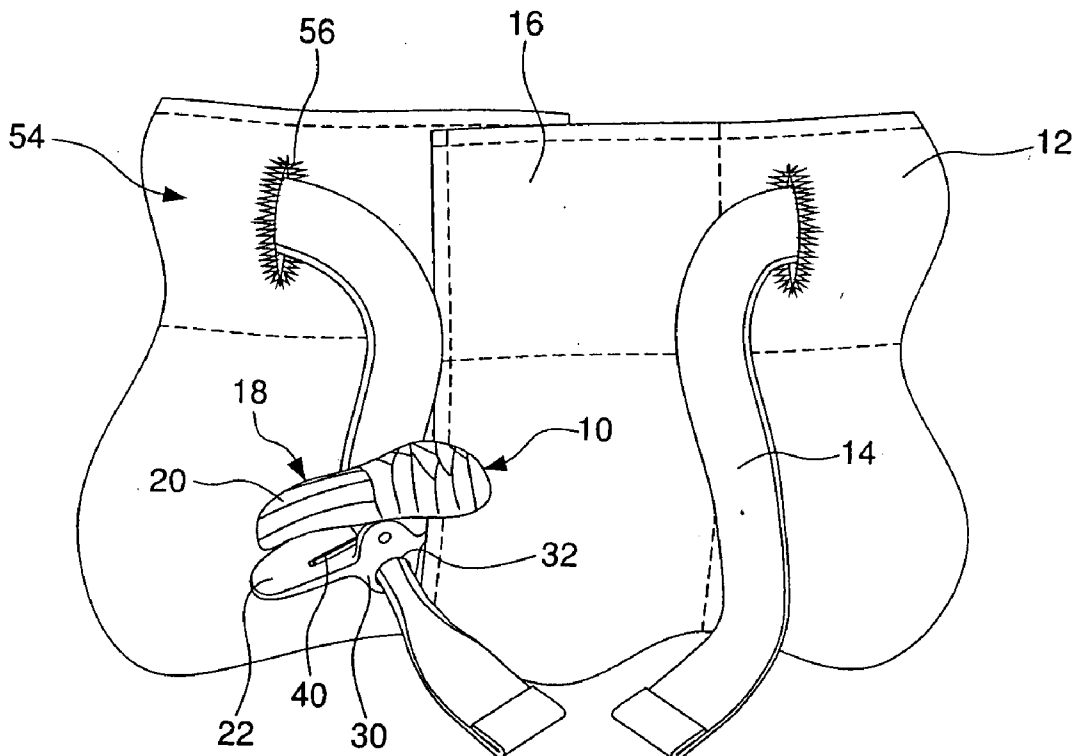
A device for securing a string to an article of clothing, such as a garment or shoe, to prevent the string from being drawn away, for example into a string tunnel or through an eyelet. The device includes a clothing attachment mechanism and a string receiver. The attachment mechanism preferably includes a clip have first and second members movable between opened and closed clip positions for securing the device to the clothing at a selected location. The string receiver receives and holds the string preventing the string from being drawn away. The string receiver preferably defines an aperture for slidingly receiving the string. The device preferably includes a spring to bias the clip to the closed position. In one embodiment, the upper clip member is decoratively configured to resemble a wing.

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Related U.S. Application Data

(60) Provisional application No. 60/809,073, filed on May 26, 2006.



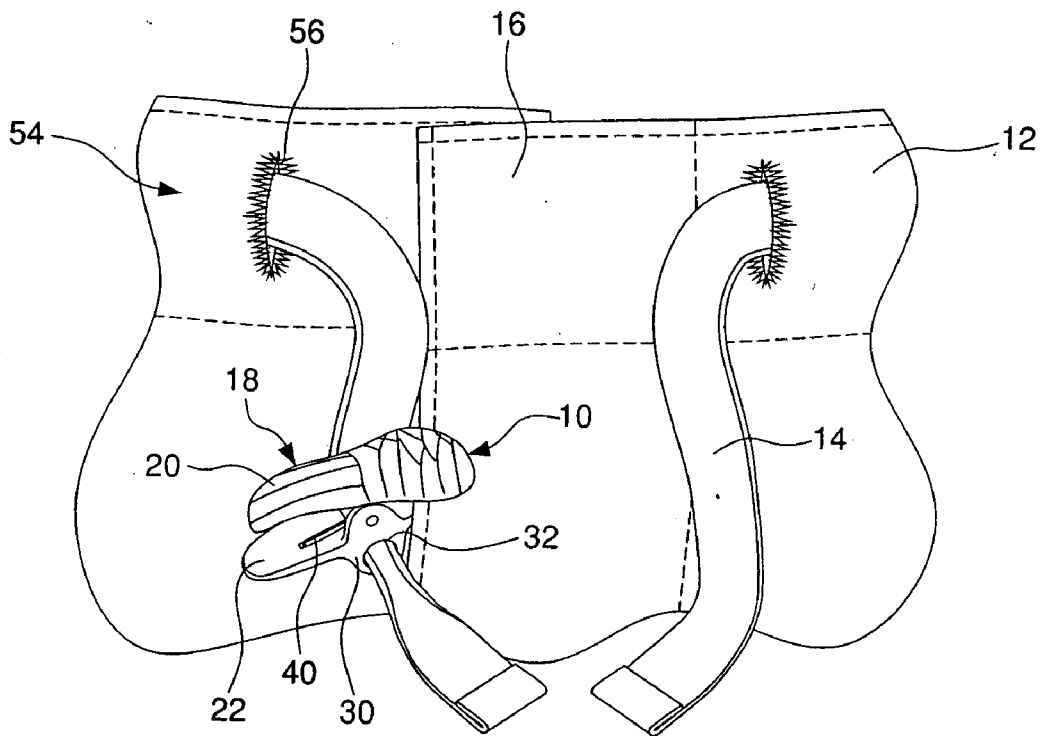


FIG. 1

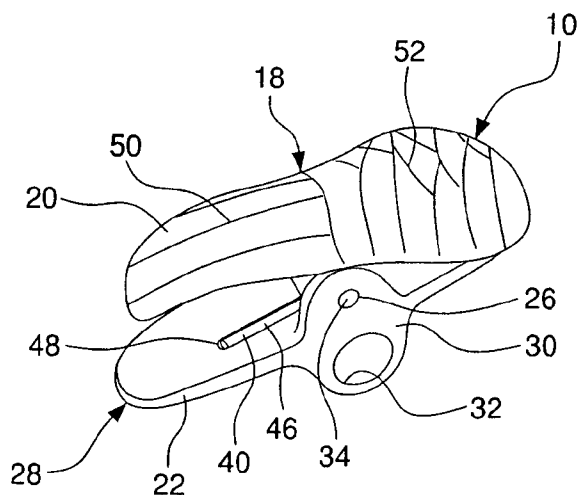


FIG. 2

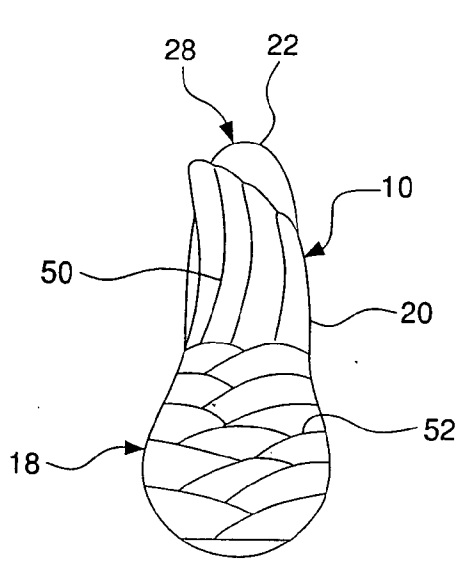


FIG. 3

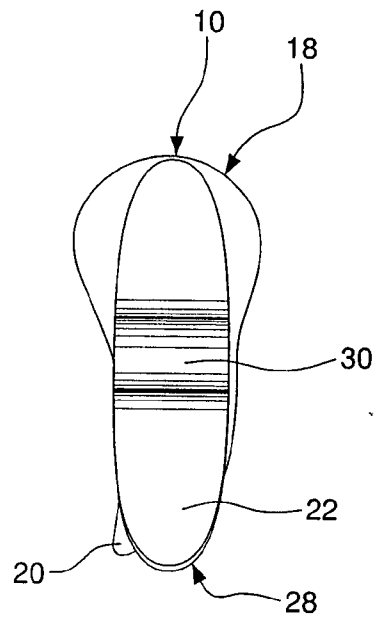


FIG. 4

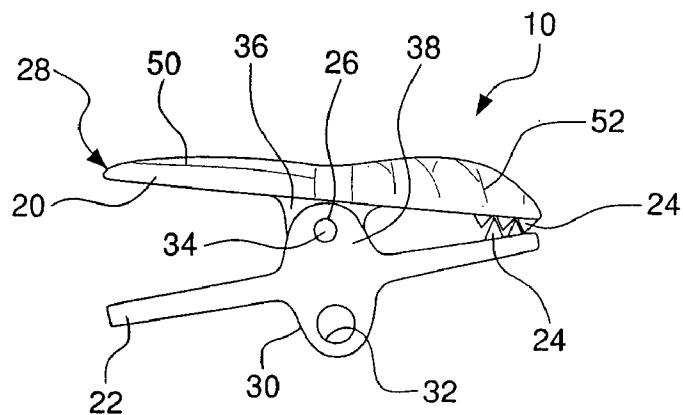


FIG. 5

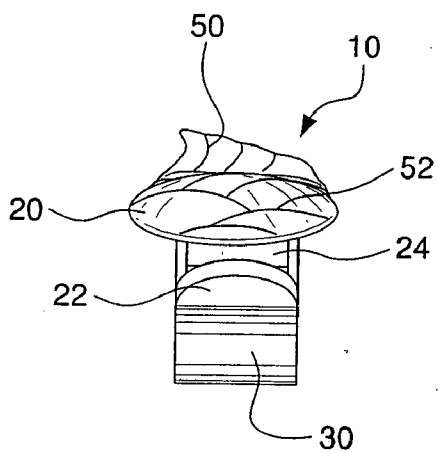


FIG. 6

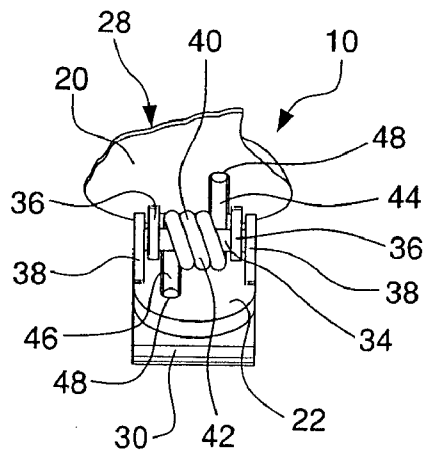


FIG. 7

DEVICE FOR PREVENTING LOSS OF A STRING IN AN ARTICLE OF CLOTHING

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority from U.S. Provisional Patent Application No. 60/809,073, filed May 26, 2006, which is hereby incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates generally to garments having strings received in string tunnels of the garment or shoelaces and, more particularly to a device for preventing loss of the string within the string tunnel of the garment or to capture a shoelace.

BACKGROUND OF THE INVENTION

[0003] Numerous garments include strings received in tunnels or other enclosures formed in the garment. Examples of such garments include sweat pants or shorts having a waist string received in a string tunnel defined at a waist of the garment, and hooded sweatshirts having draw strings received in a string tunnel defined in the hood. In each of these garments, end portions of the string extend outwardly from openings formed at the opposites ends of the string tunnel. In each of these garments, opposite ends of the string are grasped by a user for application of a pulling force to the string to tighten a portion of the garment (e.g., the waist of a pair of sweat pants) on the user. The ends of the string may then be tied to each other to secure the garment in the desired condition.

[0004] The relative movement between the string and the string tunnel of such garments is necessary for the above-described tightening function. However, the need for relative motion between the string and the tunnel can also have the undesirable effect of one or both of the ends of the string being drawn completely into the string tunnel. Withdrawal of the string end into the interior of the string tunnel in this manner renders the string unusable or "lost." The risk that the string of such garments will become lost within the string tunnel of the garment is particularly great during laundering of the garment because of the agitation associated with the washing and drying of garments.

[0005] What is needed is a device for securing the end of a string to a garment to limit relative movement between the end of the string and the garment, thereby eliminating the risk that the end of the string will be drawn into a string tunnel of the garment. Also what is needed is a device for capturing and securing loose shoelaces.

SUMMARY OF THE INVENTION

[0006] The present invention provides a device for securing a garment string to a garment to limit relative movement between the string and the garment, thereby preventing the string from being drawn into the string tunnel and becoming lost in the tunnel rendering the garment string unusable for its intended purpose. The string-securing device comprises a garment attachment mechanism adapted to secure the device to a garment at a selected location on the garment. The string-securing device also comprises a string receiver

adapted to receive and hold the garment string such that the garment string is prevented from being drawn into the string tunnel.

[0007] According to one exemplary embodiment of the invention, the string-securing device includes a clip having upper and lower members. The clip provides an opened clip position adapted to facilitate placement of the garment between the upper and lower members at the garment location and a closed clip position. Preferably, the upper and lower member define teeth to facilitate grasping retention of the garment portion between the upper and lower clip members.

[0008] According to one embodiment the string receiver is carried by the lower clip member and defines an aperture adapted for sliding receipt of a garment string.

[0009] Preferably, the string-securing device includes a spring adapted to bias the upper and lower clip members towards the closed clip position. According to one embodiment, the spring includes elongated arms at opposite ends of a central coiled portion, the arms received in notches respectively defined by the upper and lower clip members.

[0010] Arranged in this manner, the device is adapted for placement onto the string at a desired location through the sliding receipt of the end of the string through the aperture of the string receiver. The clip of the device is adapted to secure the device and, therefore, to secure the string, to the garment at the garment location.

[0011] According to one embodiment, the upper member of the clip is decoratively configured to resemble a wing and includes a clamp end configured to resemble a shoulder area of the wing and a handle end configured to resemble a tip area of the wing.

[0012] In another embodiment, the present invention provides a clip for securing a loose shoelace.

[0013] The foregoing and other features and advantages of the present invention will become more apparent in light of the following detailed description of the preferred embodiments thereof, as illustrated in the accompanying figures. As will be realized, the invention is capable of modifications in various respects, all without departing from the scope of the invention. Accordingly, the drawings and the description are to be regarded as illustrative in nature, and not as restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] For the purpose of illustrating the invention, the drawings show a form of the invention that is presently preferred. However, it should be understood that this invention is not limited to the precise arrangements and instrumentalities shown in the drawings.

[0015] FIG. 1 is a perspective view illustrating a string clip according to an exemplary embodiment of the invention being used to secure the draw string of a garment to the garment.

[0016] FIG. 2 is a perspective view of the string clip of FIG. 1.

[0017] FIG. 3 is a top plan view of the string clip of FIG. 1.

[0018] FIG. 4 is a bottom plan view of the string clip of FIG. 1.

[0019] FIG. 5 is a side view of the string clip of FIG. 1.

[0020] FIG. 6 is a front view of the string clip of FIG. 1.

[0021] FIG. 7 is a rear view of the string clip of FIG. 1.

DESCRIPTION OF THE INVENTION

[0022] Referring to the drawings, where like numerals identify like elements, there is illustrated in the figures a string-securing device 10 according to an exemplary embodiment of the invention adapted for use with a garment of the type having a string received by a string tunnel of the garment (e.g., about the waist or neck area of a garment). Referring to FIG. 1, the string-securing device 10 is shown in use with a pants-type garment 12 to secure a waist string 14 of the garment 12 to a flap 16 or other portion of the garment 12. As described below in greater detail, the string-securing device 10 is adapted to receive the string 14 to position the device 10 on the string, and to engage the garment 12 to secure the device 10, and the string 14, to the garment 12.

[0023] Referring to FIGS. 2 through 7, the string-securing device 10 is shown in greater detail. The string-securing device 10 includes a clip 18 having upper and lower members 20, 22 rotatably connected to each other in jaw-like fashion. Terms, such as "upper" and "lower" are used herein for simplicity. It should be readily apparent that the orientation of the members 20, 22 is not critical to the invention and, therefore, the use of the terms "upper" and "lower" is by no means intended to be limiting. The rotatable connection provides for relative movement of the clip members 20, 22 between an opened position, to facilitate receipt of a portion of a garment between the clip members 20, 22, and a closed position, in which the portion of the garment is captured between the clip members 20, 22 to secure the device 10 to the garment.

[0024] Referring to the side view of the device 10 shown in FIG. 5, the device 10 preferably includes projecting teeth 24 on at least one and more preferably both the upper and lower members 20, 22 of the clip 18 adjacent a front portion of the device 10. As shown, the teeth 24 of the upper member 20 preferably intermesh with the teeth 24 of the lower member 22. The intermeshing of the teeth 24 in this manner facilitates capture and securement of a portion of a garment between the upper and lower members 20, 22, thereby promoting retention of the device 10 in a desired location on a garment. As also shown in FIG. 5, each of the upper and lower members 20, 22 extends rearwardly beyond the rotational axis at 26 to collectively form a handle portion 28 of the clip 18. The handle portion 28 is adapted to be grasped by a user (e.g., between the thumb and forefinger) for applying a compressive force to the handle to move the clip members 20, 22 from the closed clip position to the opened clip position.

[0025] The string-securing device 10 preferably includes a string receiver 30 located on a portion of the lower member 22, preferably on the bottom surface of clip 18 as shown. The string receiver 30 includes an aperture 32 adapted for slidably receiving a string of a garment, such as the waist string 14 of the garment 12 of FIG. 1. As shown, the string 14 of garment 12 is received in the aperture 32 of clip such

that the string 14, which has a relative thin rectangular or circular cross section, assumes a somewhat rolled condition adjacent the aperture 32. The rolling of the string 14 in this manner facilitates retention between the device 10 and the string 14 at a given location along the string 14 to which the device 10 has been placed. As should be understood, the rolling of the string 14 depends on the cross section of the string as well as on the size of the aperture 32 of the string receiver 30. The invention, however, is not limited to any particular cross-sectional shape or size for either the string receiver aperture 32 or a string receivable by the aperture 32. Preferably, however, the sliding receipt of the string by the aperture 32 will generate sufficient friction to promote retention of the device 10 at a given location along the string 14 to which the device has been drawn.

[0026] Referring the FIG. 7, the string-securing device 10 includes a pin 34 having opposite ends received in aligned openings in supports 36, 38 of the upper and lower clip members 20, 22. The supports 36, 38 are respectively located on bottom and top surfaces of the upper and lower members 20, 22. The receipt of the pin 34 by the supports 36, 38 of the clip members 20, 22 maintains the connection between the upper and lower members 20, 22 while providing for the above-described relative rotation for movement of the clip members 20, 22 between the closed and opened clip positions.

[0027] The string-securing device 10 also includes a spring 40 for biasing the upper and lower clip members 20, 22 towards the closed clip position shown in the figures. Referring to the rear view of FIG. 7, the spring 40 includes a central coiled portion 42 and elongated arms 44, 46 at opposite ends of the coiled portion 42. As shown, the arms 44, 46 are preferably respectively received in notches 48 defined on the bottom and top surfaces of the upper and lower members 20, 22. The receipt of the spring arms 44, 46 in the notches 48 desirably conceals the spring 40 from view when the spring is viewed from the side view shown in FIG. 5, thus providing a more visually pleasing appearance.

[0028] Referring the FIGS. 2 and 3, the upper clip member 20 of string-securing clip 18 is preferably ornamentally configured. As shown in the top view of FIG. 3, the upper clip member 20 is shaped such that, in the exemplary embodiment, the periphery resembles a bird's or angel's wing. Also, to enhance the wing-like appearance, the top surface of the upper clip member 20 is formed with longitudinal or curved grooves 50 defining areas of the top surface representing feathers of a wing tip area and a series of transverse or curved grooves 52 defining surface areas representing overlapping feathers of a shoulder area of a bird's wing. Preferably, the upper and lower clip members 20, 22, including the design features presented on the top surface of the upper clip member 20 are formed by molding the clip members 20, 22 from a moldable plastic material. The string receiver 30 is preferably formed integrally with the lower clip member 22. It should be understood that the present invention is not limited to the wing-like design shown in the figures and that the upper clip member 20 could be configured to represent various appearances, including images, alphanumeric characters, designs, etc.

[0029] Referring again to FIG. 1, the string-securing device 10 is adapted for use with the garment 12 in the following manner to prevent an end of the waist string 14 of

the garment 12 from being drawn into the string tunnel 54 through one of the openings 56 defined by the string tunnel. As discussed above, such a situation frequently occurs when garments of this type are laundered. To use the device 10, a user would first feed the end portion of the waist string 14 into the aperture 32 of the string receiver 30 from a first side of the device until the string protrudes from the aperture 32 on the opposite side of the device, until a sufficient length of the string extends out such that it can be grasped by the user (e.g., between the thumb and forefinger). Next, the device 10 is placed in a desired location on the string 14 by grasping the string 14 and the device 10 with opposite hands and pulling the device along the string to the desired location. As discussed above, frictional forces will preferably be sufficient to retain the device 10 in its placed position along the string 14. The user then grasps the handle portion 28 of the device 10 defined by the upper and lower clip members 20, 22 to move the clip members 20, 22 to the opened clip position. The user then places the open jaws of the clip members on opposite sides of a portion of the garment 12 (e.g., the flap of the pants-type garment 12 shown). Upon release of the handle portion 28, the spring 40 will act to return the clip members 20, 22 to the closed clip position thereby clamping the garment portion between the teeth 24 of the clip members 20, 22, thereby securing the device 10 and the string 14 to the garment 12. Alternately, the jaws of the clip could be clamped onto the other end of the string, thereby using one clip to prevent both ends of the string from being drawn into the string tunnel.

[0030] It should be understood that the device 10 is not limited to the pants-type garment 12 shown having a waist string 14 and has application to other garments having strings in string tunnels such as hooded sweatshirts, for example. It should also be noted that it not required that the garment include some feature such as the flap 16 of the pants-type garment 12 shown to facilitate secured placement of the device 10 onto the garment 12. The device 10 could be placed onto any garment 12, for example by folding a portion of the garment 12 and then placing the folded garment portion between the teeth 24 of the device 10 in its opened clip position.

[0031] The present invention can also be used to secure a shoelace for capturing loose shoelace ends. In this embodiment, the aperture 32 of the string received 30 is sized to receive a conventional shoelace (either flat or round). Once a end of the shoelace is inserted through the aperture 32, the device can be clipped to the other end of the shoelace or secured to the shoe.

[0032] The foregoing describes the invention in terms of embodiments foreseen by the inventor for which an enabling description was available, notwithstanding that insubstantial modifications of the invention, not presently foreseen, may nonetheless represent equivalents thereto.

What is claimed is:

1. A string-securing device for preventing loss of a garment string within a string tunnel of a garment, the string-securing device comprising:

- a garment attachment mechanism adapted to secure the device to the garment at a selected location on the garment; and

a string receiver adapted to receive the garment string and hold the garment string such that the garment string is prevented from being drawn into the string tunnel.

2. The string-securing device according to claim 1, wherein the garment attachment mechanism includes a clip having first and second members movable with respect to each other between an opened position facilitating receipt of the garment between the first and second members at the garment location and a closed position.

3. The string-securing device according to claim 1, wherein the string receiver defines an aperture adapted for sliding receipt of the garment string.

4. The string-securing device according to claim 1, wherein the garment attachment mechanism includes a clip having upper and lower members movable with respect to each other between an opened clip position and a closed clip position and wherein the string receiver is located on the lower clip member.

5. The string-securing device according to claim 2, wherein the clip includes a pin received by the first and second clip members for rotatably connecting the first and second clip members to each other.

6. The string-receiving device according to claim 5 further comprising a spring for biasing the first and second clip members towards the closed clip position, the spring including an intermediate coil portion received by the pin and first and second spring arms at opposite ends of the coil portion respectively contacting the first and second clip members.

7. The string-securing device according to claim 6, wherein the first and second clip members each define a recess for respectively receiving the first and second arms of the spring.

8. The string-securing device according to claim 6, wherein each of the first and second clip members includes a clamp end and a handle end located on opposite sides of the pin and wherein the arms of the spring contact the handle ends of the clip members to bias the clip members towards the closed clip position.

9. The string-securing device according to claim 8, wherein the clamp end of each of the first and second clip members defines a plurality of teeth, the teeth of the first clip member adapted for meshing receipt by the teeth of the second clip member when the clip is in the closed clip position.

10. The string-securing device according to claim 5, wherein the string receiver is located on the second clip member opposite the pin of the clip.

11. The string-securing device according to claim 4, wherein each of the upper and lower clip members includes a clamp end and an opposite handle end and wherein an upper surface of the upper clip member is decoratively configured to resemble a wing, the clamp end of the upper clip member configured to resemble a shoulder area of the wing and the handle end of the upper clip member configured to resemble a tip area of the wing.

12. A string-securing device for preventing loss of a garment string within a string tunnel of a garment, the string-securing device comprising:

- a clip for securing the string-securing device to the garment at a selected garment location, the clip having upper and lower clip members rotatably connected to each other for relative rotation between an opened clip position facilitating receipt of the garment between the upper and lower clip members at the garment location and a closed clip position; and

a string receiver defining adapted to receive the garment string and hold the garment string such that the garment string is prevented from being drawn into the string tunnel.

13. The string-securing device according to claim 12, wherein clip includes a pin received by the upper and lower clip members for rotatably connecting the upper and lower clip members to each other, and wherein the string receiver is located on the lower clip member opposite the pin.

14. The string-securing device according to claim 12, wherein the string receiver defines an aperture adapted for sliding receipt of the garment string.

15. A string-securing device for preventing loss of a string in an article of clothing, such as a shoe, the string-securing device comprising:

a clothing attachment mechanism adapted to secure the device to the clothing at a selected location on the clothing; and

a string receiver adapted to receive the clothing string and hold the string such that the clothing string is prevented from being drawn away.

16. The string-securing device according to claim 15, wherein the article of clothing is a shoe, wherein the clothing string is a shoelace, the string receiver having an aperture for receipt of the shoelace.

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