Collar Stay Device

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Abstract

A collar stay device includes a body having a tapered first end and an expandable second end. The body includes first and second legs, which are integrally formed at the tapered first end and diverge toward the expandable second end. At least one of the legs includes a plurality of protrusions on an outer surface of a free end thereof. When the collar stay device is inserted into a prefabricated pocket in the collar of a shirt, the expandable second end of the body is contracted to place tension on the pocket and prevent movement of the collar stay device in the pocket.
COLLAR STAY DEVICE
CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] None

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

BACKGROUND OF THE INVENTION

[0003] 1. Field of the Invention
[0004] This invention relates to an improved device for shirts with collars. More particularly, the present invention relates to a collar stay device that enhances the appearance of a shirt collar by providing reinforcement to tidy and straighten the collar.

[0005] 2. Description of the Related Art
[0006] Shirt collars may wrinkle or curl as a result of washing and drying or exposure to humid weather. Various prior art devices have been used to help shirt collars retain their shape and appearance. For example, some dress shirts have button holes in the collar, which mate with corresponding buttons sewn on the shirt to hold tips of the collar down.

[0007] Everett, U.S. Pat. No. 4,975,983, entitled “Shield Collar Stay System,” discloses a shield collar stay that has a slot-like channel for surrounding and gripping the vertical and horizontal edges of a shirt collar.

[0008] Gibson, U.S. Pat. No. 6,089,422, entitled “Collar Stiffening Device and Method,” discloses a trim-to-fit base of semi-rigid material that is secured using an adhesive to the underside of a collar, thereby providing the collar with a desired, stiffened shape.

[0009] Barnes, U.S. Pat. No. 6,748,602, entitled “Decorative Magnetic Collar Stay,” discloses a detachable magnetic collar stay with top and bottom portions of opposite polarities. The bottom portion of the device, which is adapted to receive a plastic collar stay, is placed underneath a collar, and the top portion of the device is placed over the collar. The magnets of the top and bottom portions retain the stiffened collar theretbetween.

[0010] Thomas, U.S. Pat. No. 7,004,361, entitled “Collar Shaping Device,” discloses a flexible sheet substrate with an adhesive coating on both sides of the substrate. The substrate is placed between the shirt body and the collar to fix the collar in place.

[0011] Still others, such as O’Connor, U.S. Pat. No. 3,286,278, entitled “Knitwear Articles Having Collars,” disclose plastic stays that are inserted in pockets located at the edges of the collar. Malouf, Jr., U.S. Pat. No. 4,286,337, entitled “Shape Retaining Collar Devices and Articles of Wearing Apparel Using Same,” discloses a knitted collar with pockets for plastic stays. The pockets are stitched closed once the stays are inserted.

[0012] Friedman, U.S. Pat. No. 7,051,376, entitled “Knitted Collar With Stays and Method of Manufacturing Such a Collar,” noted several problems with prior stays and collar pockets, including movement of the stays within the pocket and the inability to remove a stay once the pocket has been sewn up. Friedman discloses a knitted collar body having a pocket at each of its two selvedges. A stay is disposed in the pocket of each selvedge. The stay may include at least one protrusion to prevent the stay from moving within the pocket.

[0013] Although the protrusions on the Friedman stays restrict movement of the stay within the pocket, the protrusions hamper removal of the stay from the pocket of the collar. There is a need, therefore, for an improved collar stay that remains immobile while in a collar pocket to stabilize the collar’s points but that is relatively easy to extract from the pocket when desired.

SUMMARY OF THE INVENTION

[0014] The present invention discloses a collar stay device that overcomes the aforementioned disadvantages. The present collar stay device is simple to insert into and remove from a collar pocket. When placed in the collar pocket, the collar stay device creates tension to hold the collar stay device in place, thereby stabilizing the point of the collar.

[0015] In accordance with one embodiment of the invention, a collar stay device for use on a shirt having a collar includes a stay body. The stay body has a tapered first end and an expandable second end. The stay body includes first and second legs, which are integrally formed at the tapered first end and diverge toward the expandable second end. At least one of the first and second legs includes a plurality of protrusions on an outer surface of a free end thereof. When the collar stay device is inserted into a prefabricated pocket in the collar of a shirt, the expandable second end of the stay body is contracted to place tension on the pocket and prevent movement of the collar stay device in the pocket.

[0016] In accordance with another embodiment of the invention, a shirt includes a shirt body and a collar coupled to the shirt body. The collar has two pockets formed therein, one pocket proximate each point of the collar. The shirt further includes two collar stay devices, each removably inserted in a corresponding pocket of the collar. Each collar stay device includes a stay body having a tapered first end and an expandable second end. The stay body includes first and second legs. The first and second legs are integrally formed at the tapered first end and diverge toward the expandable second end. At least one of the first and second legs includes a plurality of protrusions on an outer surface of a free end thereof. When the collar stay device is inserted into a prefabricated pocket in the collar of a shirt, the expandable second end of the stay body is contracted to place tension on the pocket and prevent movement of the collar stay device.

[0017] Having briefly described the present invention, the above and further objects, features and advantages thereof will be recognized by those skilled in the pertinent art from the following detailed description of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] The present invention, in accordance with one or more various embodiments, is described in detail with reference to the following figures. The drawings are provided for purposes of illustration only and merely depict typical or example embodiments of the invention. These drawings are provided to facilitate the reader’s understanding of the invention and shall not be considered limiting of the breadth, scope, or applicability of the invention. It should be noted that for clarity and ease of illustration these drawings are not necessarily made to scale.

[0019] FIG. 1 is a front view of a collar stay device according to one embodiment of the present invention.

[0020] FIG. 2 is an enlarged view of a portion of the collar stay device taken along circle 2-2 of FIG. 1.
Fig. 3 is a perspective view of a shirt including a collar with the collar stay device attached. Fig. 4 is a plan view of a portion of a collar, illustrating the collar stay device of FIG. 1 partially inserted into a pocket of the collar. Fig. 5 is a plan view of a portion of a collar, illustrating the collar stay device of FIG. 1 fully inserted into the pocket. Fig. 6 is a front view of a collar stay device according to another embodiment of the present invention.

**Detailed Description of the Invention**

A collar stay device 10 in accordance with one embodiment of the present invention is illustrated in FIG. 1. Collar stay device 10 includes a stay body 12. Stay body 12 has a first end 14 that is tapered for ease of insertion into a pocket of a collar and an expandable second end 16. Stay body 12 includes a first leg 18 and a second leg 20. Stay body 12 is formed as a unitary piece with first leg 18 and second leg 20 integrally formed at first end 14. The first and second legs diverge from first end 14, such that a free end 22 of first leg 18 is biased from a free end 24 of second leg 20 when collar stay device 10 is in an unconstrained state, e.g. when not inserted in a shirt collar.

Stay body 12 may be formed of any suitable metal or non-metal material. In a preferred embodiment, stay body 12 is formed of a non-metal material, such as a high tensile polymer material, and may be formed by injection molding.

Stay body 12 has a length L, which is the distance from first end 14 to second end 16, preferably in the range of 1.7 centimeters and 2.3 centimeters, and more preferably between 6.0 centimeters and 9.0 centimeters. When collar stay device 10 is in an unconstrained state, stay body 12 has a second end width W_{c2}, which is the overall distance from an outer surface 28 of free end 22 of first leg 18 to an outer surface 28 of free end 24 of second leg 20, of between 1.7 centimeters and 2.3 centimeters, and more preferably about 2.0 centimeters. When collar stay device 10 is in a constrained state, free end 24 of second leg 20 is drawn toward free end 22 of first leg 18, and the inner surfaces 30 of the two legs may abut each other. In a constrained state, second end 16 of stay body 12 has a width W_{c} preferably in the range of 9.0 millimeters to 12.0 millimeters.

Second leg 20 of stay body 12 includes a plurality of protrusions 26 formed along free end 24. As shown more clearly in FIG. 2, protrusions 26 project from outer surface 28 of free end 24, preferably at a distance P of approximately 1.0 millimeter. Protrusions 26 may be ridges, teeth, bumps or any other appropriate features that aid stay body 12 in gripping the fabric of a collar pocket, in which collar stay device 10 is inserted.

Fig. 3 illustrates a shirt 32 employing collar stay device 10. Shirt 32 includes a shirt body 34, to which a collar 36 is attached. Collar 36 has prefabricated pockets 38 (see FIGS. 4 and 5) proximate collar points 40. Each pocket 38 receives a respective collar stay device 10, which straightens the respective collar point 40, thereby providing the collar 36 with a crisp and tidy appearance.

FIGS. 4 and 5 provide a close up of pocket 38 and collar point 40 and illustrate the insertion of collar stay device 10 into pocket 38. The tapered first end 15 of collar stay device 10 is introduced first into the opening of pocket 38. Insertion of the collar stay device 10 into pocket 38 is facilitated by pinching together free ends 22 and 24 of first and second legs 18 and 20, respectively, while pushing the tapered first end 15 further into pocket 38. When collar stay device is fully inserted in pocket 38 of collar 36, inner surfaces 30 of first and second legs 18 and 20 may abut each other, as shown in FIG. 5. Depending on the width of pocket 38, however, there may be a gap between inner surfaces 30 of first and second legs 18 and 20. First and second legs 18 and 20 are biased apart to create tension on the walls of pocket 38 and retain collar stay device 10 in pocket 38. Protrusions 26 on second leg 20 further aid in gripping a wall of pocket 38 to prevent collar stay device 10 from sliding around in pocket 38.

The features of collar stay device 10 enable it to be easily removed from collar pocket 38, if necessary. Removal of collar stay device 10 is achieved by pinching together free ends 18 and 20 of first and second legs 18 and 20, respectively, to “retract” protrusions 26 from the wall of pocket 38 and then withdrawing collar stay device 10 from pocket 38.

FIG. 6 illustrates a collar stay device 10' in accordance with another embodiment of the invention. Collar stay device 10', which is similar to collar stay device 10, includes a stay body 12'. Stay body 12' has a first end 14 that is tapered for ease of insertion into a pocket of a collar and an expandable second end 16. Stay body 12' is also formed as a unitary piece and includes a first leg 18' and a second leg 20' integrally formed at first end 14. First and second legs 18' and 20' diverge from first end 14, such that a free end 22' of first leg 18' is biased from a free end 24' of second leg 20' when collar stay device 10' is in an unconstrained state.

Collar stay device 10 differs from collar stay device 10 in that both legs 18' and 20' include a plurality of protrusions 26' projecting from an outer surface 28' of respective free ends 22' and 24'. As discussed above, protrusions 26 may be ridges, teeth, bumps or any other appropriate feature. Having protrusions 26 on both legs of stay body 12 enables collar stay device 10' to grip both side walls of a collar pocket.

While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not.of limitation. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments. Terms and phrases used in this document, and variations thereof, unless otherwise expressly stated, should be construed as open ended as opposed to limiting. As examples of the foregoing: the term “including” should be read as meaning “including without limitation” or the like; the term “example” is used to provide exemplary instances of the item in discussion, not an exhaustive or limiting list thereof; and terms and phrases such as “known,” “apparent to one of skill in the art,” “conventional,” “traditional,” “normal,” “standard,” and terms and phrases of similar meaning should not be construed as limiting the item described to a given time period or to an item available as of a given time, but instead should be read to encompass conventional, known, apparent, traditional, normal, or standard technologies that may be available now or at any time in the future. Likewise, a group of items linked with the conjunction “and” should not be read as requiring that each and every one of those items be present in the grouping, but rather should be read as “and/or” unless expressly stated otherwise. Similarly, a group of items linked with the conjunction “or” should not
be read as requiring mutual exclusivity among that group, but rather should be read as “and/or” unless expressly stated otherwise.

What is claimed is:
1. A collar stay device for use on a shirt having a collar, the collar stay device comprising:
   a stay body having a tapered first end and an expandable second end, the stay body including a first leg and a second leg integrally formed at the tapered first end, the first leg and the second leg diverging toward the expandable second end,
   wherein at least one of the first leg and the second leg includes a plurality of protrusions on an outer surface of a free end thereof.

2. The collar stay device according to claim 1, wherein each of the first leg and the second leg includes a plurality of protrusions on an outer surface of a free end thereof.

3. The collar stay device according to claim 1, wherein the collar stay device is adapted to be inserted into a prefabricated pocket in a collar of a shirt, and the expandable second end of the stay body is contracted to place tension on the prefabricated pocket and prevent movement of the collar stay device in the prefabricated pocket.

4. The collar stay device according to claim 1, wherein the stay body is composed of a non-metal material.

5. The collar stay device according to claim 4, wherein the stay body is composed of a high tensile polymer material.

6. The collar stay device according to claim 1, wherein the stay body has a length from the tapered first end to the expandable second end between 6.0 centimeters and 9.0 centimeters.

7. The collar stay device according to claim 1, wherein the expandable second end of the stay body has an unconstrained width of approximately 2.0 centimeters.

8. The collar stay device according to claim 1, wherein each the plurality of protrusions projects from the outer surface of the free end approximately 1 millimeter.

9. A shirt comprising:
   a shirt body;
   a collar coupled to the shirt body, the collar having two points and two pockets formed therein, each pocket located a corresponding point; and
   two collar stay devices, each collar stay device removably inserted in a corresponding pocket of the collar, each collar stay device comprising:
   a stay body having a tapered first end and an expandable second end, the stay body including a first leg and a second leg integrally formed at the tapered first end, the first leg and the second leg diverging toward the expandable second end, at least one of the first leg and the second leg includes a plurality of protrusions on an outer surface of a free end thereof,
   wherein the expandable second end of the stay body is contracted to place tension on the corresponding pocket and prevent movement of the collar stay device in the pocket.

10. The shirt according to claim 9, wherein both the first leg and the second leg of stay body include a plurality of protrusions on an outer surface of a free end thereof.

11. The shirt according to claim 9, wherein each the plurality of protrusions projects from the outer surface of the free end approximately 1 millimeter.

12. The shirt according to claim 9, wherein the stay body is composed of a non-metal material.

13. The shirt according to claim 9, wherein the stay body has a length from the tapered first end to the expandable second end between 6.0 centimeters and 9.0 centimeters, and wherein the expandable second end of the stay body has an unconstrained width of approximately 2.0 centimeters.

14. The shirt according to claim 13, wherein the expandable second end of the stay body has a constrained width of approximately 1.0 centimeter, when the collar stay device is inserted in the pocket of the collar.

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