

HOSIERY RETAINING DEVICE AND METHOD

CROSS REFERENCE TO RELATED APPLICATION

This application claims the benefit of U.S. Provisional Application No. 60/081,473, filed April 10, 1998, and U.S. Provisional Application No. 60/082,840, filed April 23, 1998, and U.S. Provisional Application No. 60/105,442, filed October 23, 1998 and U.S. Application No. 09/221,040 filed December 29, 1998.

Technical Field

This invention relates to the field of storage devices for hosiery, such as sheer hosiery, nylon and silk stockings, thigh highs, tights, opaques, legwear, and pantyhose. The inventive device provides compact storage and easy organization of hosiery, such as pantyhose, stockings, and other items which are difficult to store, organize and retrieve.

Background Art

Hosiery is well known. An exceedingly large variety and quantity of hosiery, whether made of nylon, silk, or other materials, are sold each year worldwide. However, there has been little development in the area of storage and organization of such hosiery. Instead, hosiery is generally put into a drawer and is not organized in any particular manner. In addition, two of the more popular colors for hosiery are navy and black. These colors are often difficult to distinguish in the darkness of a bedroom, especially early in the morning when the wearer is dressing. As such, certain improvements were desired. Many of those improvements have been accomplished by the present invention.

Disclosure of the Invention

The present invention permits easy retrieval of hosiery. It prevents tangling and bunching of hosiery in drawers. The device prevents entangling of hosiery with other items packed in a suitcase. The device prevents snagging of hosiery. The device can be made in various colors to allow matching of the device with the color of the hosiery to be secured upon the device. In addition, the device can bear indicia identifying the color of the hosiery to be placed upon the device. The indicia help identify the color of the hosiery, especially in the case of a darkened room, where small gradations in color are difficult to perceive.

Brief Description of Drawings

The invention may take physical form in certain parts and arrangement of parts. A preferred embodiment of these parts will be described in detail in the specification and illustrated in the accompanying drawings, which form a part of this disclosure and wherein:

FIGURE 1 is a side view of the current invention;

FIGURE 2 is an end view of the current invention;

FIGURE 3 is an alternative side view of the current invention;

FIGURE 4 is a side view of one end portion of the current invention;

FIGURE 5 is an alternative side view of the one end portion of the current invention;

FIGURE 6 is yet another side view of one end portion of the current invention;

FIGURE 7 is a perspective view of the inner member of the current invention;

FIGURE 8 is a perspective view of an alternative inner member of the current invention;

FIGURE 9 is a cross section of the inner member of the current invention;

FIGURE 10 is a cross section of an alternative inner member of the current invention;

FIGURE 11 is a perspective view of the inner member of the current invention;

FIGURE 12 is a perspective view of an alternative inner member of the current invention;

FIGURE 13 is a perspective view of another alternative inner member of the current invention;

FIGURE 14 is yet another perspective view of an alternative inner member of the current invention;

FIGURE 15 is a side view of an alternative embodiment of the current invention;

FIGURE 16 is a side view of another embodiment of the current invention;

FIGURE 17 is a side view of yet another embodiment of the current invention; and,

FIGURE 18 is a side view of an additional embodiment of the current

invention.

Best Mode for Carrying Out the Invention

The invention will be described with reference to the enclosed FIGURES. With reference now to FIGURES 1-3, the device 10 generally comprises an inner member 20 and a flexible outer member 30. Preferably, the inner member 20 and outer member 30 are coaxial with the outer surface 11 of inner member 20 and the inner surface 33 of outer member 30 adjacent to one another.

The inner member 20 is preferably manufactured of plastic or some other non-toxic, non-corrosive, inexpensive material. The outer member 30 is preferably made of a soft, deformable material such as foam. By elastically deformable, it is meant that outer member 30 may deform, and then bounce back, when force is applied to it. Preferably, outer member 30 will return to its original shape once the force is no longer applied to it. While the outer member 30 could be made of another non-crushable material, it is somewhat important that the outer member have an appropriate coefficient of friction between its outer surface 32 and the hosiery. While a completely smooth outer surface 32 could work, an outer surface with a higher coefficient of friction between it and the hosiery assists in the winding of the hosiery around the outer member 30. In an alternative embodiment of the present invention outer member 30 can be covered with alternative material provided that the alternative material yields the foregoing objectives. For instance, outer member 30 could be covered with satin. As is shown in FIGURE 15, the inner member 20 may comprise frictioning means 9 such as bumps or mildly adhesive agents. Incorporation of the frictioning means 9 into the current invention may result in the outer member 30 being unnecessary. Thus, the hosiery could be wound around the inner member 20. Alternatively, frictioning means 9 may help to retain the outer member 30 to the inner member 20.

Outer member 30 may alternatively be retained to the inner member 20 by other embodiments of the current invention. The preferred embodiment comprises flared ends on the inner member 20. FIGURES 1, 3, 4, 5, 6 and 16 show this preferred embodiment of the current invention. FIGURE 18 shows an alternative embodiment of the same.

With reference to FIGURES 1-3, another important element of the device 10 is

a retaining means 40. Preferably, retaining means 40 is elastically deformable. The retaining means 40 can take different forms, including a resiliently stretchable piece of plastic made of the same material as the inner member 20. Another form is that of an elastic band, such a rubber band. The preferred embodiment of the retaining means is an elastomeric, resilient, and elastic band coated with some sort of material, such as thread, or fabric, so that it does not tear the hosiery 50. For ease of illustration, in FIGURE 3 the retaining means 40 is illustrated thicker than is actually preferred. As the load placed upon the retaining means 40 is fairly light, the strength of the retaining means 40 can also be fairly low. The retaining means 40 is preferably connected to first end portion, E1, of the current invention through first connecting means 21, although connecting means can be utilized.

FIGURES 15, 16, 17 and 18 show alternative embodiments of the current invention. In FIGURE 15, retaining means 40 is connected to second end portion, E2, of the current invention by second connecting means 22. Second connecting means 22 may take a variety of forms, such as raised protrusions which frictionally adheres one end of the retaining means 40 to the second connecting means 22. The retaining means 40 depicted in FIGURE 15 may be rigid in one embodiment of the current invention. In such an embodiment, one end of retaining means 40 may be operatively connected to first end portion, E1, of the current invention by way of first connecting means 21 where first connecting means 21 comprises universal joining means.

FIGURE 17 shows an alternative embodiment of the current invention wherein the first connecting means 21 comprises hinging means and the second connecting means 22 comprises snap fitting means. In this embodiment, all or any part of the retaining means 40 may be rigid. In FIGURE 16 an alternative embodiment is depicted wherein both the first, 21, and second, 22, connecting means comprise a plug and socket arrangement. FIGURE 18 shows an embodiment of the current invention wherein the retaining means 40 is made of an elastomeric material so that it may be stretched over the article and looped over second, 22, connecting means.

FIGURES 4, 5 and 6 show alternative embodiments of second connecting means 22. FIGURE 4 shows second connecting means 22 comprising an aperture 26'. FIGURE 5 shows another embodiment where second connecting means 22 comprises

a slanted aperture 26''. FIGURE 6 shows yet another embodiment where second connecting means 22 comprises a double slanted aperture 26'''. Any combination of the foregoing embodiments, arrangements and components of the retaining means 40 and first, 21, and second, 22, connecting means are contemplated by the current invention.

While the size of the device is a matter of design choice and should be chosen with sound engineering judgment depending on the circumstances of each case, generally it is believed that a preferred length L of the device 10 would be about 6 inches long and between 1 inch and 3 inches in diameter D. As shown in FIGURES 3, 15, and 17, first and second end portions, E1 and E2, respectively, have diameters DE1 and DE2, respectively. Diameters DE1 and DE2 are less than or equal to D and are preferably about 0.5 inch. As shown in FIGURE 3, inner member 20 preferably has an elongated hourglass shape, with a diameter in the central region 42 being approximately 0.3 inch. As stated above, second end portion E2 of the current invention may comprise a bulbous extension 24 as second connecting means 22 for receiving retaining means 40.

With reference to FIGURE 7, inner member 20 may be configured along its length other than as a round cylinder. For instance, rather than a circle, a cross section of inner member 20 may be a cross-shape, bearing four portions 23, with each portion 23 being separated from an adjacent portion 23 by angle A, wherein angle A is about 90°. Alternatively, a cross section of the inner member 20 may reveal that the inner member 20 has three portions 23, separated by angle A, wherein angle A is about 120°. This embodiment is depicted in FIGURE 8. The current invention envisions an inner member 20 having any number of multiple linear portions 23. The current invention further envisions multiple linear portions 23 having various configurations and separations, such as different angles A1 through An, where none of the angles are equal or only some of the angles are equal.

Preferably, regardless of the configuration of the inner member 20, the diameter in the central region of inner member 20 is approximately 0.3 inches and the diameters of the end portions DE1 and DE2 are each approximately 0.5 inches. These central and end diameters are depicted as 27, DE1 and DE2, respectively in FIGURES 9, 10 and 11. FIGURES 12, 13 and 14, respectively, depict alternative embodiments

of inner member 20 wherein inner member 20 has two cross slits, a hollow core and a single cross slit.

With reference to FIGURE 2, indicating means 42 can be placed at different locations on the device 10 to assist the user in identifying an attribute or characteristic of the hosiery placed thereon, such as the color of the hosiery. For example, as illustrated in FIGURE 2, the letter "N" has been placed on the second end portion E2 of the current invention. It is envisioned that the letter "N" could be written in white or luminous material so that the user is better able to identify the color of hosiery in a darkened room. For example, the letter "N" could refer to the color "navy" and therefore help the user identify that navy hosiery, not black hosiery, is wound upon the device 10.

The method of use of the innovative device 10 will now be discussed. The retaining means 40 is loosened at the second end portion E2 of the device 10. One end of the hosiery 52 is laid adjacent to the outer surface 32 of the outer member. The hosiery 50 is then wound around the outer member 30 in successive layers 54, 56, 58, 60 until the second end of the hosiery is reached. At this point, the retaining means 40 is connected by second connecting means 22 to the second end portion E2 of the device 10.

While either end of the hosiery 50 may be wound around the outer member 30 first, so that the other end of the hosiery 50 ultimately faces out and is contacted by retaining means 40, it is preferred that the foot portion of the hosiery 50 be laid upon the surface 32 of the outer member 30 first and that the buttocks and upper thigh portion of the hosiery 50 ultimately faces out and is contacted by retaining means 40. This is preferred because typically the buttocks and upper thigh portions of hosiery are reinforced and/or contain more padding thus offering more protection to the hosiery while it is stored in and subject to rearrangement in a dresser drawer. This ultimately results in increased longevity of the hosiery.

In another embodiment of the invention, the inner member 20 and/or the outer member 30 or any other portion of the device 10 may be scented and/or contain an antiodor, deodorizing and/or odor absorbing agent. Additionally, antimicrobial, disinfecting and/or antibacterial agents may be incorporated into the current invention. These agents are preferably incorporated into the outer member 30 and/or inner

member 20.

With reference to FIGURE 17, in yet another variation of the current invention, outer member 30 may have tapered ends 31. Outer member 30 may take a variety of configurations and forms provided that the hosiery is able to be wound
5 around it.

Still other benefits and advantages of the invention will become apparent to those skilled in the art to which it pertains upon a reading and understanding of the following detailed specification. For instances, it is within the scope of the current invention to use the current invention with the storage of neckties, socks, or belts by
10 winding them around the current invention. Additionally, the current invention contemplates any such similar application and embodiment of the current invention.

While the invention has been described in connection with specific embodiments and applications, no intention to restrict the invention to the examples shown is contemplated. It will be apparent to those skilled in the art that the above
15 methods may incorporate changes and modifications without departing from the general scope of this invention. It is intended to include all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.

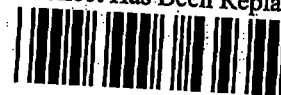
Having thus described the invention, it is now claimed:

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CLAIMS

1. A device for retaining an article of apparel, the device comprising:
a first member upon which an article may be retained; and,
retaining means for retaining the article upon said first member.

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- 5 2. The device of claim 1 further comprising:

a second member operatively supported by and coaxial with said first member where the article may be retained upon an outer surface of said second member, said retaining means retaining the article upon said second member.

3. The device of claim 1 wherein said first member further comprises:

10 adhering means for providing additional adherence between the article and said first member.

4. The device of claim 1 further comprising:

indicating means for indicating an attribute of the retained article.

5. The device of claim 1 where said retaining means is comprised of an elastomeric
15 substance.

6. The device of claim 1 further comprising:

a length L, said length L being between 2 and 12 inches;

a diameter D along said length L, said diameter D being between 0.1 and 5.0
inches;

20 first end portion, E1, said first end portion having a diameter DE1, said diameter DE1 being between 0.1 and 5.0 inches; and,

second end portion, E2, said second end portion having a diameter DE2, said diameter DE2 being between 0.1 and 5.0 inches, said retaining means retaining the article upon the device when said retaining means is simultaneously operatively
25 connected to said first and second end portions.

7. The device of claim 6 where D is less than or equal to DE1 and D is less than or equal to DE2.

8. The device of claim 2 further comprising:

a length L, said length L being between 2 and 12 inches;

30 a diameter D along said length L, said diameter D being between 0.1 and 5.0 inches;

first end portion, E1, said first end portion having a diameter DE1, said



diameter DE1 being between 0.1 and 5.0 inches, D being less than or equal to DE1;
and,

second end portion, E2, said second end portion having a diameter DE2, said
diameter DE2 being between 0.1 and 5.0 inches, D being less than or equal to DE2,

5 said retaining means retaining the article upon the device when said retaining means is
simultaneously operatively connected to said first and second end portions.

9. The device of claim 6 where said first end portion E1 comprises a first connecting
means, said retaining means being operatively connected to the device through said
first connecting means.

10 10. The device of claim 9 where said second end portion E2 comprises a second
connecting means, said retaining means retaining the article upon the device when said
retaining means is simultaneously operatively connected to said first and second
connecting means.

11. The device of claim 8 where said first end portion E1 comprises a first connecting
15 means and said second end portion E2 comprises a second connecting means, said
retaining means retaining the article upon the device when said retaining means is
simultaneously operatively connected to said first and second connecting means.

12. The device of claim 1 where said first member comprises multiple linear portions
(23), said linear portions being separated by an angle A.

20 13. The device of claim 2 further comprising:
disinfecting means.

14. The device of claim 2 further comprising:
deodorizing means.

15. The device of claim 1 comprising a substantially cylindrical configuration.

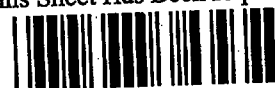
25 16. The device of claim 2 comprising a substantially cylindrical configuration.

17. The device of claim 1 where said first member comprises an aperture.

18. The device of claim 2 where said second member is comprised of a deformable
material.

30 19. The method of retaining an article of apparel on a device where the device
comprises a first member upon which the article is retained and retaining means for
retaining the article upon said first member comprising the steps of:

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positioning the article upon the device; and,
retaining the article upon the device by elastically deforming the retaining means.

20. The method of claim 18 where the device further comprises a first end portion
5 and a second end portion further comprising the steps of:

connecting said retaining means to said first end portion as well as said second end portion.

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