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(54) **BREATHABLE PROTECTIVE HEAD COVERING**

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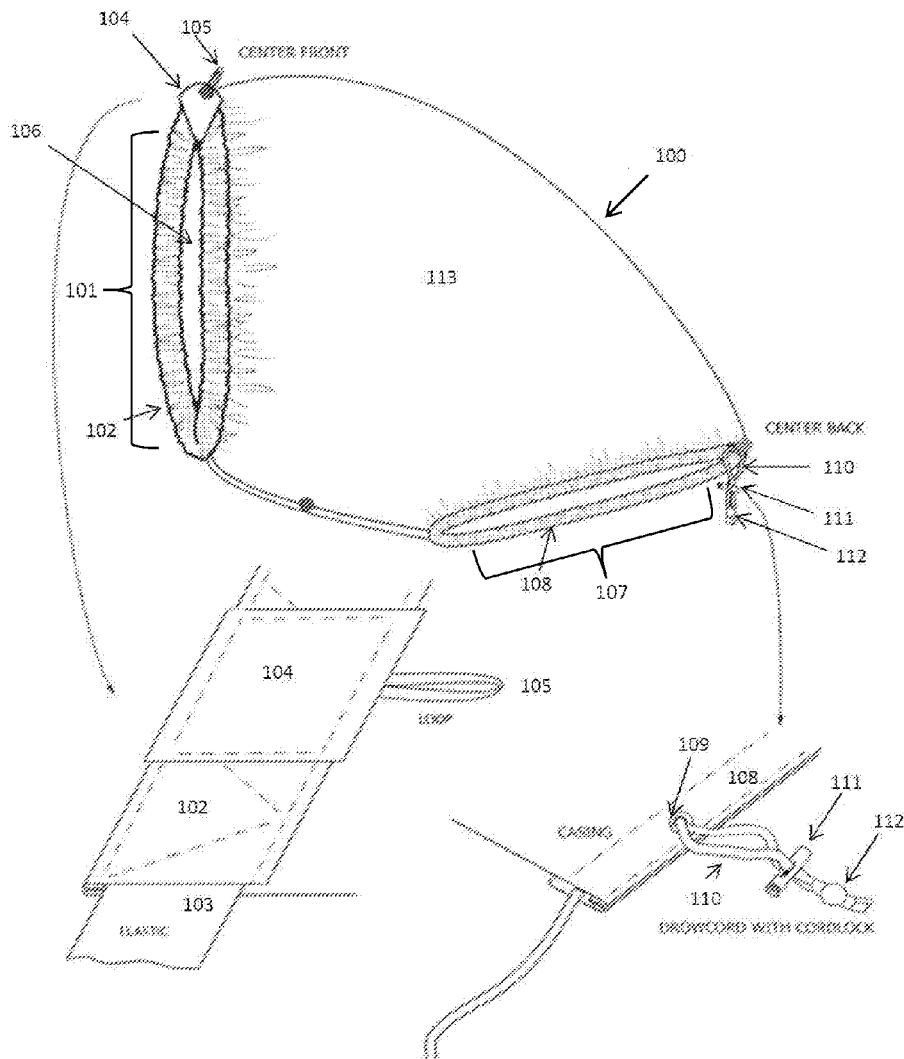
(57) **ABSTRACT**

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A protective head covering includes a cylindrical-like sleeve with two large openings, one at the top and one at the bottom. The first opening expands and contracts using an elastic band and the second opening can be closed using a sealing mechanism that confines the user's hair to the inside of the cap, sealing out all water, wind or other elements. The bottom of the sleeve can be secured up off of the user's neck, back and shoulders using a fastening member.

**Related U.S. Application Data**

(60) Provisional application No. 62/199,074, filed on Jul. 30, 2015.



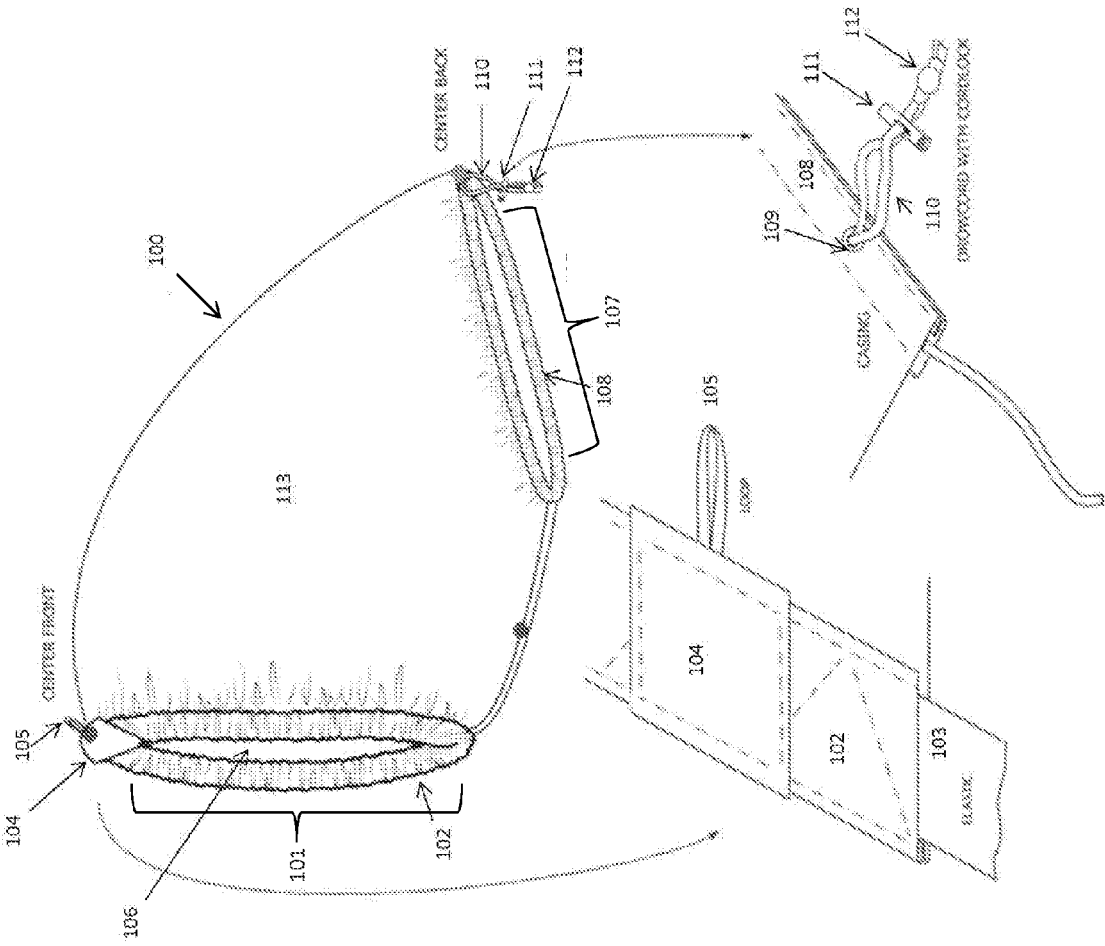


Fig. 1

FIG. 2A

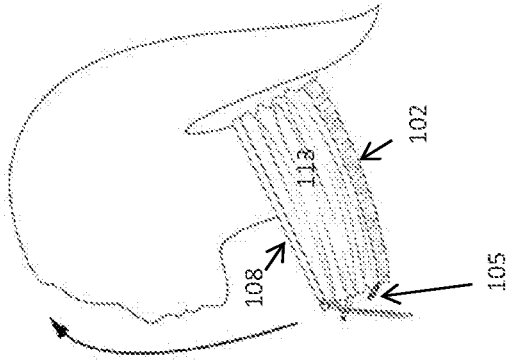


FIG. 2B

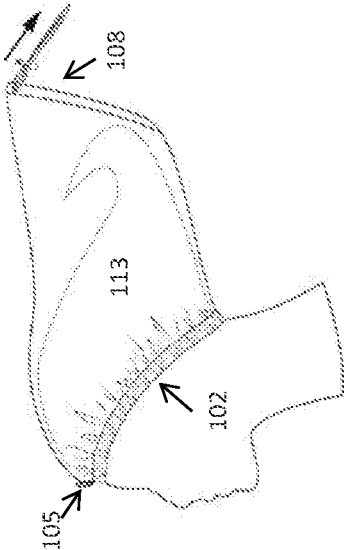


Fig. 2C

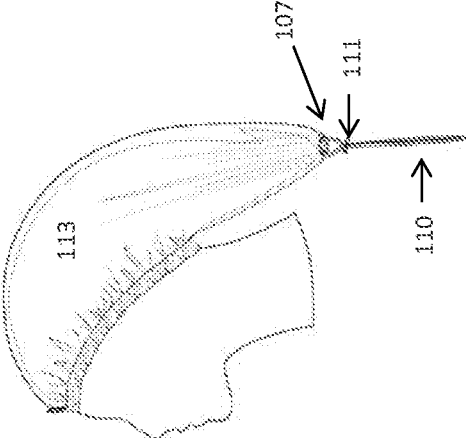


Fig. 2D

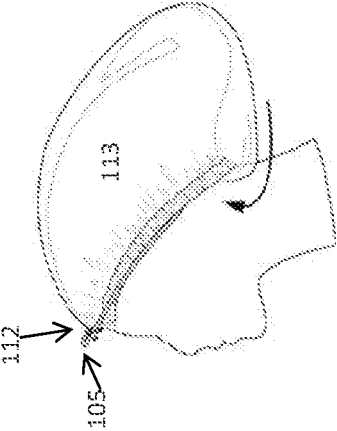


Fig. 3

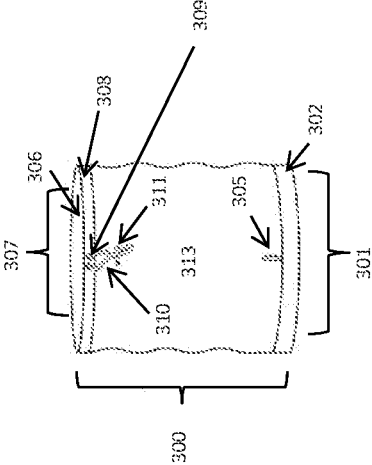


FIG. 4A

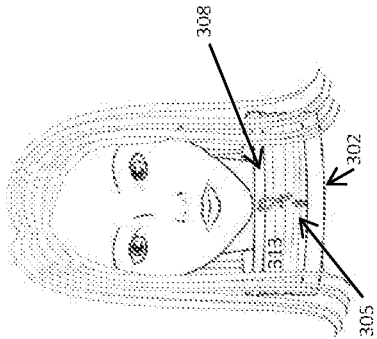




Fig. 4B

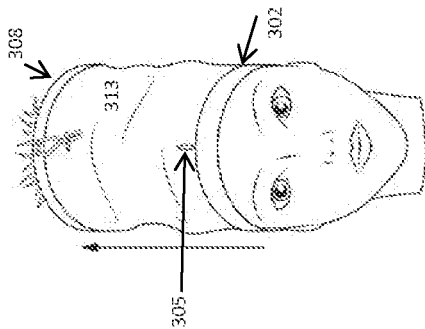


FIG. 4C

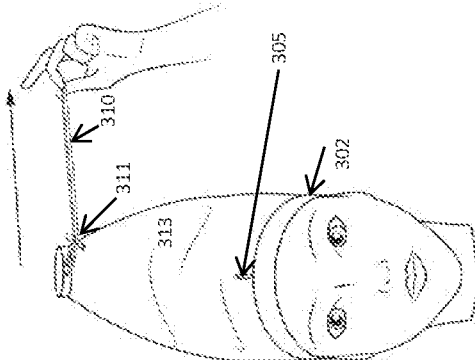


Fig. 4D

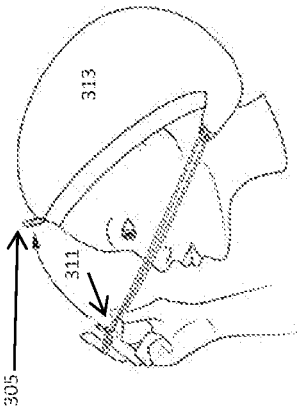
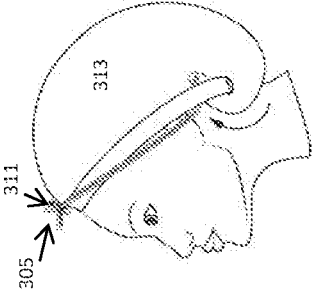


FIG. 4E



## BREATHABLE PROTECTIVE HEAD COVERING

### CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Patent Application Ser. No. 62/199,074, filed Jun. 30, 2015, the entire contents of which is hereby incorporated by reference herein.

### TECHNICAL FIELD

[0002] The present invention relates to a breathable protective head covering that can be used, for example, in the shower or on other occasions during which the user wants to keep his or her hair completely dry.

### BACKGROUND

[0003] Consumers across the globe frequently use shower caps to protect their hair from water and steam while bathing or showering. Traditional shower caps typically include a crown made from water-resistant material, such as vinyl or plastic, with one large opening, usually trimmed with elastic, which is intended to seal around the hairline once placed on top of the user's head.

[0004] There are a number of issues with traditional shower caps that leave consumers dissatisfied with the effectiveness of these products. Since the cap is pulled down on top of the head, hair may be exposed outside the cap around the hairline (in front near the forehead, around the ears, and in back along the nape of the neck), if all hair is not appropriately pushed up under the cap. It can also be difficult for users with longer hair to ensure that all hair fits and stays under the cap and remains dry. Many users with longer hair first need to secure their hair with a hair tie or clip before using the shower cap. This usage of a hair tie or clip to keep hair up under the cap can cause creasing and ruin the hairstyle that they may be trying to preserve by not washing the hair. Additionally, the material typically used for traditional shower caps is not breathable, causing a buildup of heat and steam inside the cap, which can make the user's scalp sweat and dampen the hair. Current shower cap options are made from inferior materials, which last for very few uses before disposal or tearing. In addition to the inferior material of the cap portion, the elastic bands surrounding the opening of traditional shower caps are very thin and flimsy, preventing the cap from remaining in place and sealed around the user's hairline. This causes hair to easily come out from beneath the cap, exposing it to the elements.

### SUMMARY

[0005] Embodiments of the present invention address and overcome one or more of the above shortcomings and drawbacks, by providing a breathable, protective cap worn on the head that can be used in the shower or other occasions during which the user wants to keep his or her hair completely dry or protected from the elements, even around the hairline, without ruining his or her hairstyle by force-fitting or restricting the hair in unnatural positions or causing the user to sweat. While both male and females can use the protective head covering described herein, the pronouns "her" and "she" are used herein for simplification purposes. [0006] According to some embodiments of the present invention, the waterproof, breathable, protective cap com-

prises a cylindrical-like sleeve with two large openings, one at the top and one at the bottom. The sleeve may be constructed out of any waterproof, breathable and machine-washable material, allowing the user to preserve the cap for a much longer duration than traditional caps. Depending on intended use of the cap, the internal and external channels may also be made of non-waterproof materials such as cotton, terrycloth, nylon or polyester. The first opening expands and contracts using an elastic band or similar component in order to fit over the user's head and seal securely to her hairline. The second opening is adjustable and can be secured using a sealing device such as a zipper or one similar to a drawstring concept by pulling the drawcord, which can be string, elastic, nylon, or other similar material and securing with a cordlock or similar device. The end of the drawstring can be pulled toward the loop at the front of the cap on the user's forehead and secured via fastening members including but not limited to a toggle, button, bead, snap, string, elastic or similar method.

[0007] In some embodiments, a user utilizes the aforementioned protective cap by first pushing both openings of the sleeve toward each other, thus compressing the cap. She then pulls the compressed sleeve over her head down to her neck, with the elastic end on the bottom, closest to her shoulders, and the sealing (e.g., drawstring, zipper) end facing up, closest to her ears. She ensures that all her hair is pulled up and over the top of the scrunched cap around her neck, and not trapped underneath. She then pulls the compressed cap up over her face, enveloping her hair, and secures the elastic band over her hairline, framing her face, with the loop feature in the center of her forehead on her hairline. After ensuring all hair is fully captured within the cylindrical sleeve in the back, the user pulls the drawstring to close the second opening and secures with the cordlock or other securing mechanism. The user then tucks the secured second opening by rolling it under towards the nape of the neck in order to avoid exposing the second opening to the shower stream (or other source of water). She then brings the string or cord from the back of the cap to the front of the cap and secures the positioning by placing the toggle, button, etc. through the loop at the front and center of the cap on her forehead.

[0008] Additional features and advantages of the invention will be made apparent from the following detailed description of illustrative embodiments that proceeds with reference to the accompanying drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The foregoing and other aspects of the present invention are best understood from the following detailed description when read in connection with the accompanying drawings. For the purpose of illustrating the invention, there are shown in the drawings embodiments that are presently preferred, it being understood, however, that the invention is not limited to the specific detailed description:

[0010] FIG. 1 is a view of an embodiment of a protective head covering according to some embodiments of the present disclosure;

[0011] FIG. 2A shows a side view of the first step of putting the head covering on according to some embodiments, wherein a user pulls the covering down around the neck to rest at the shoulders;

[0012] FIG. 2B shows the second step of putting the head covering on, with the user sliding the cap back over her face to secure around the hairline;

[0013] FIG. 2C shows the third step of putting the head covering on, with the user securing the closing mechanism;

[0014] FIG. 2D shows the fourth step of putting the head covering on, with the user securing the fastening device at the front of the cap;

[0015] FIG. 3 illustrates a frontal view the protective head covering;

[0016] FIG. 4A shows a front view of the first step of putting the head covering on according to some embodiments, wherein a user pulls the head covering down around the neck to rest at the shoulders;

[0017] FIG. 4B shows the second step of putting the head covering on, with the user sliding the cap back over her face to secure around the hairline;

[0018] FIG. 4C shows the third step of putting the head covering on with the user securing the closing mechanism;

[0019] FIG. 4D shows the fourth step of putting the head covering on, with the user securing the fastening device at the front of the cap; and

[0020] FIG. 4E shows an example of the user wearing the product.

#### DETAILED DESCRIPTION

[0021] The following disclosure describes the present invention according to several embodiments directed at a breathable, protective cap worn on a user's head. The cap may be used, for example, in the shower or other occasions during which the user wants to keep his or her hair completely dry or protected from the elements, even around the hairline, without ruining his or her hairstyle by force-fitting or restricting the hair in unnatural positions or causing the user to sweat.

[0022] FIG. 1 is a view of a protective head covering 100 (also referred to herein as a "cap") according to some embodiments of the present disclosure. The protective head covering 100 in this example comprises one large opening 101 made of an elastic band 103, which is shown to surround the opening 101, allowing it to expand and contract while placing on the user's head and securing around the hairline. The inset shows a close-up version of the headband 102 that encases the elastic 103. The encasing 104 holds the securing device 105 that serves as a fastening device when connected with the other end of the fastening member 112. The second opening 107 is made using an expandable end 108 that expands and contracts using a sealing device 110 (e.g., a zipper, drawstring, cord, elastic, nylon or similar material) through openings surrounded by grommets 109 (or a similar instrument). The sealing device 110 is secured using a locking device, such as a cordlock 111. A fastening member 112 is used to attach the sealing device 110 in the securing device 105 at the front of the cap. Various types of fastening members may be used including, without limitation, a bead, toggle, or snap. The head covering 100 further comprises an interior channel 106 that surrounds the hair and an exterior channel 113 that is exposed. The interior channel 106 and exterior channel 113 are comprised in some embodiments of a layer of waterproof material that may also be breathable. Alternative approaches can be taken in using non-waterproof material (e.g., terrycloth or cotton) internally or externally, depending on required use of the head covering 100. Additionally, in some embodiments, interior channel 106

and exterior channel 113 are made of two different types of material, creating a double layer covering.

[0023] FIGS. 2A-2D illustrate a side view of a method of using the protective head covering 100 shown in FIG. 1, according to some embodiments. In FIG. 2A, the user pulls both openings 101 and 107 over her head down to her neck, with the elastic end 102 closest to her shoulders and the second expandable end 108 closest to her ears. The securing device 105 in the front and center of the cap should be positioned in front of her face and not behind her head. She ensures that all of her hair is pulled up and over the top of the protective head covering 100 around her neck, and not trapped underneath.

[0024] In FIG. 2B, the user then pulls the protective head covering 100 up over her face enveloping her hair and securing the elastic end 102 over her hairline, with the securing device 105 in the center of her forehead on her hairline.

[0025] In FIG. 2C, after ensuring all hair is captured within the cylindrical sleeve, the user pulls the sealing device 110 to close the second opening 107 and secures with cordlock 111.

[0026] In FIG. 2D, if the user desires to avoid the cap from resting on her back and shoulders, she can tuck the closed second opening 107 down towards the nape of the neck in order to avoid exposing the second opening to the shower stream and securing the fastening member 112 using the securing device 105 at the front and center of the cap on her forehead.

[0027] FIG. 3 is a frontal view of the protective head covering 300, according to some embodiments of the present invention. The protective head covering 300 in this example comprises one large opening 301 with an elastic end 302 comprised of elastic material (e.g., an elastic band), which allows the elastic end 302 to expand and contract when placed on the user's head and securing around the hairline. The second opening 307 comprises an expandable end 308 that expands and contracts using a sealing device 310 (e.g., a zipper, drawstring, cord, elastic, nylon or similar material) through openings surrounded by grommets 309 (or similar instrument). The sealing device 310 is secured using a locking device, such as a cordlock 311. The protective head covering 300 further comprises an interior channel 306 that surrounds the hair and exterior channel 313 that is exposed.

[0028] FIGS. 4A-4E illustrate a frontal view of a method of using the protective head covering 300 shown in FIG. 3. In FIG. 4A, the user pulls both openings 301 and 307 over her head down to her neck, with the elastic end 302 closest to her shoulders and the second expandable end 308 closest to her ears. The front and center of the cap 305 should be positioned in front of her face and not behind her head. She ensures that all her hair is pulled up and over the top of the scrunched cap around her neck, and not trapped underneath.

[0029] In FIG. 4B, the user then pulls the cap up over her face enveloping her hair and secures the elastic end 302 over her hairline, with the front and center of the cap 305 in the center of her forehead on her hairline.

[0030] In FIG. 4C, after ensuring all hair is captured within the cylindrical sleeve, the user pulls the sealing device 310 to close the second opening and secures with cordlock 311.

[0031] In FIG. 4D, if the user desires to avoid the protective head covering 300 from resting on her back and

shoulders, she can tuck the closed second opening 307 by rolling it under the elastic end 302 of the first opening 307 towards the nape of the neck in order to avoid exposing the second opening 307 to the shower stream. She can then secure the fastening member using the securing device 305 at the front and center of the cap on her forehead. In FIG. 4E, the user is wearing the product after this action is performed. [0032] Some advantages of the breathable, protective cap described herein include an easy way to capture all hair the way it naturally falls (meaning there is no need for the user to secure her hair with hair clips or ties) and breathable material (meaning the hair being protected under the covering will not be ruined by steam or sweat). Additionally, by reversing the momentum and direction of capturing the hair by pulling upward instead of pushing up under a cap with only one opening, the head covering described herein ensures all of the hair will remain dry around the hairline. The wide elastic band helps to keep the cap in place on the user's head to ensure the hair remains under the covering. The material is washable and durable, extending the life-cycle compared to traditional shower caps, which may tear or become moldy.

[0033] Furthermore, the described features, advantages, and characteristics of the breathable, protective cap may be combined in any suitable manner in one or more embodiments and are not limited to just those discussed above. In addition, the invention could be used for different purposes, such as keeping one's hair dry outside in the rain or protecting one's hair from wind.

[0034] The breathable, protective cap and related methods described above are not exclusive. Other systems, apparatuses, and methods may be derived in accordance with the principles of the invention to accomplish the same objectives. Although this invention has been described with reference to particular embodiments, it is to be understood that the embodiments and variations shown and described herein are for illustration purposes only. Modifications to the current design may be implemented by those skilled in the art, without departing from the scope of the invention. No claim element herein is to be construed under the provisions of 35 U.S.C. 112, sixth paragraph, unless the element is expressly recited using the phrase "means for."

We claim:

1. A protective head covering comprising:
  - a cylindrical-like sleeve comprising:
    - a first opening at a top portion of the cylindrical-like sleeve that expands and contracts in diameter, and
    - a second opening at a bottom portion of the cylindrical-like sleeve that can be secured and closed.
2. The protective head covering of claim 1, further comprising:
  - a layer of breathable and washable material applied to an external surface of the cylindrical-like sleeve.
3. The protective head covering of claim 2, wherein the material is waterproof.
4. The protective head covering of claim 2, wherein the material is machine-washable.
5. The protective head covering of claim 1, further comprising:
  - an internal channel comprised of a layer of a waterproof material.

6. The protective head covering of claim 1, further comprising:

- an internal channel comprised of a layer of a non-waterproof material.

7. The protective head covering of claim 6, wherein the non-waterproof material is cotton.

8. The protective head covering of claim 6, wherein the non-waterproof material is terrycloth.

9. The protective head covering of claim 6, wherein the non-waterproof material is nylon.

10. The protective head covering of claim 6, wherein the non-waterproof material is polyester.

11. The protective head covering of claim 1, wherein the first opening at the top portion of the cylindrical-like sleeve expands and contracts in diameter in response to user operation of a stretchable mechanism.

12. The protective head covering of claim 11, wherein the stretchable mechanism comprises an elastic band.

13. The protective head covering of claim 1, wherein the second opening at the bottom portion of the cylindrical-like sleeve is an adjustable opening configured to open and close in response to user operation of a sealing mechanism.

14. The protective head covering of claim 13, wherein the sealing mechanism comprises a drawstring mechanism made of a string, cord, elastic or nylon.

15. The protective head covering of claim 13, wherein the sealing mechanism used is a zipper.

16. The protective head covering of claim 1, further comprising a securing device on the protective head covering configured to secure the second opening to the base of the head covering.

17. The protective head covering of claim 16, wherein the securing device comprises a loop securing mechanism made of string, cord, elastic or nylon that is secured with a toggle or bead.

18. The protective head covering of claim 16, wherein the securing device comprises a holding mechanism such as a button, snap or velcro.

19. A method of using a protective head covering, comprising:

- inserting the head of a user through a first opening of the protective head covering;

- inserting the head of the user through a second opening of the protective head covering, placing the first opening down by the shoulders of the user and the second opening up by the ears of the user with a front and center portion of the cap facing in front of the face of the user and not behind the head of the user;

- arranging the first opening to surround the head of the user around the hairline of the user, thereby sealing the hairline of the user to protect from water or other elements;

- confining the hair of the user to the inside of the cap; and
- closing the second opening of the cap using a sealing device to prevent water or other elements from entering inside the protective head covering; and

- securing the second opening to the base of the cap with a fastening member.

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