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(54) **ADJUSTMENT MECHANISM**

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(57) **ABSTRACT**

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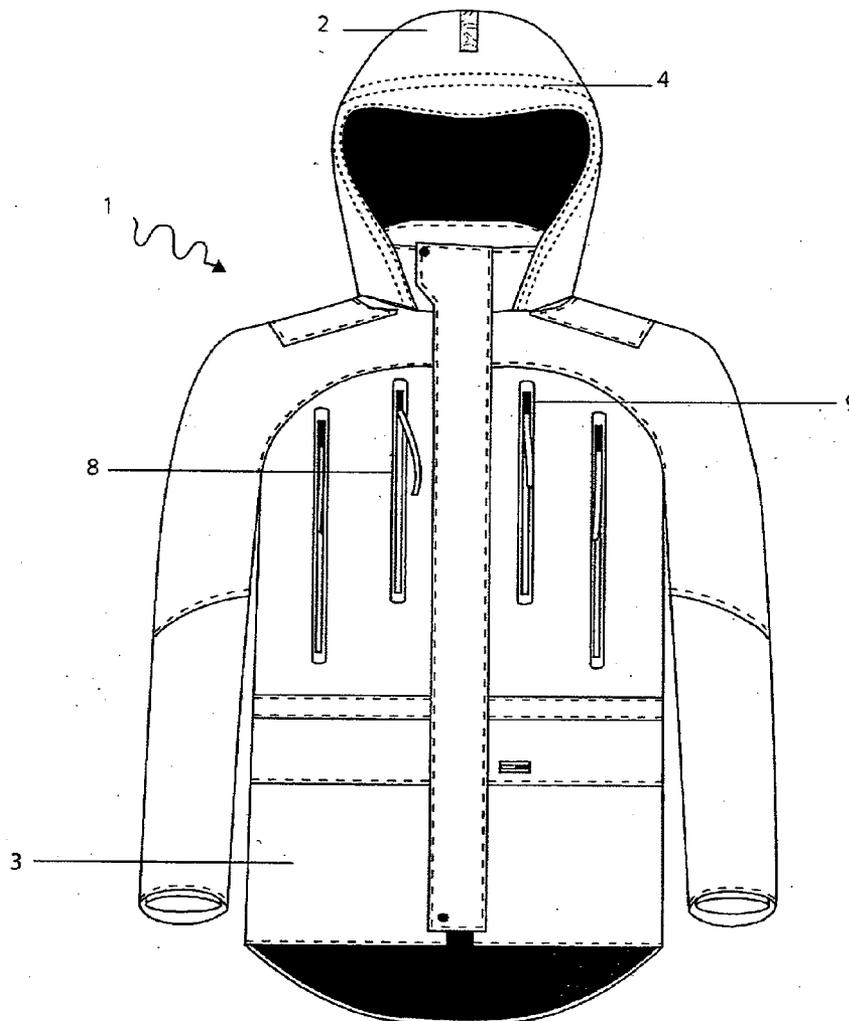
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An adjustment mechanism for the hood of a garment is described along with a method of use. The hood is tightened or loosened via pockets located on the torso of the garment. One specific embodiment is a rainwear jacket that includes two front facing pockets located on the chest of the wearer which conceal the endings of a hood cord and, by opening the pockets, the cords may be reversibly tightened and concealed by closing the pockets. The mechanism avoids use of loose toggles or other items that may catch on other objects. The cords are also positioned in a way that allows for easy and wearer visible adjustment.



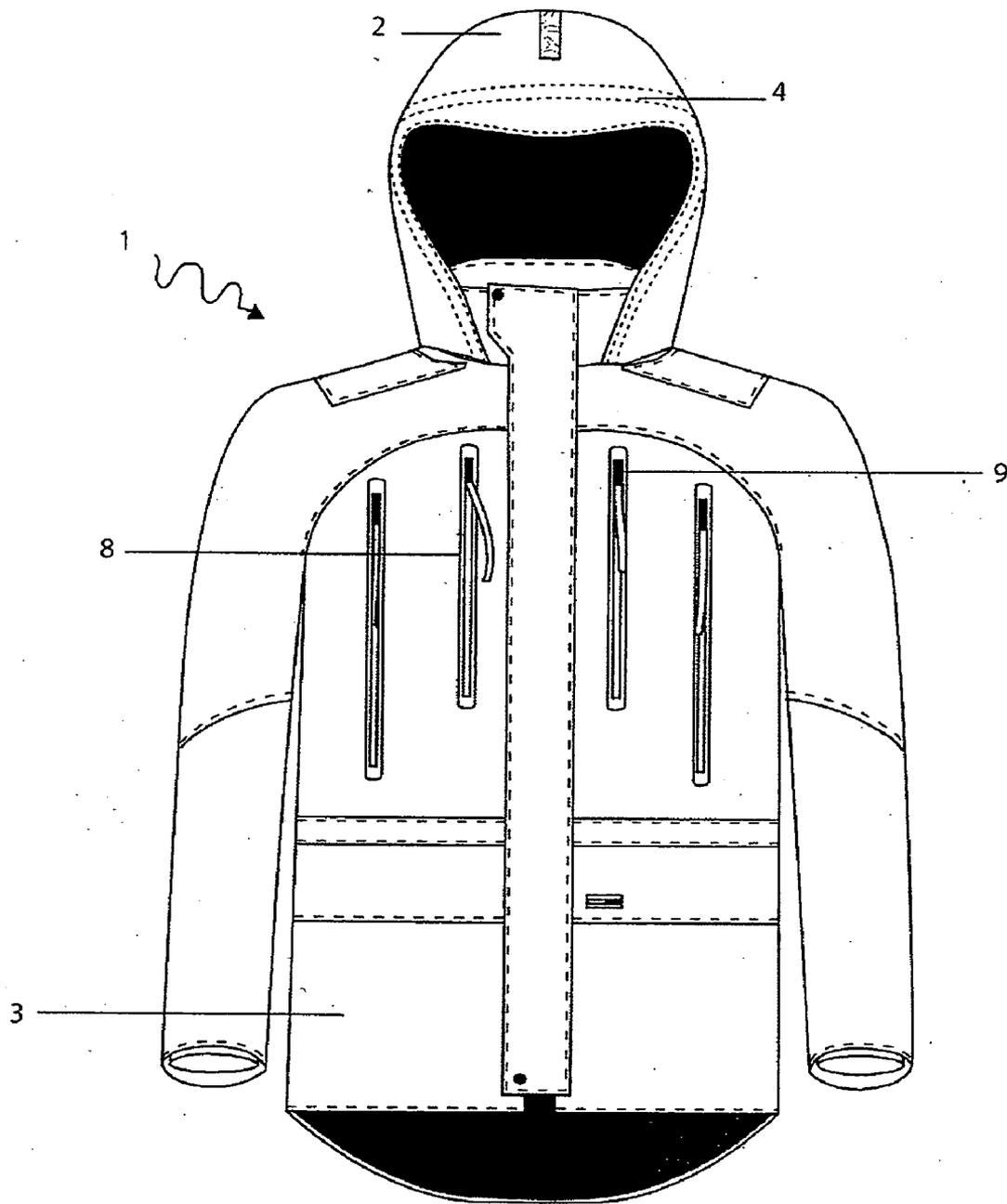


FIGURE 1

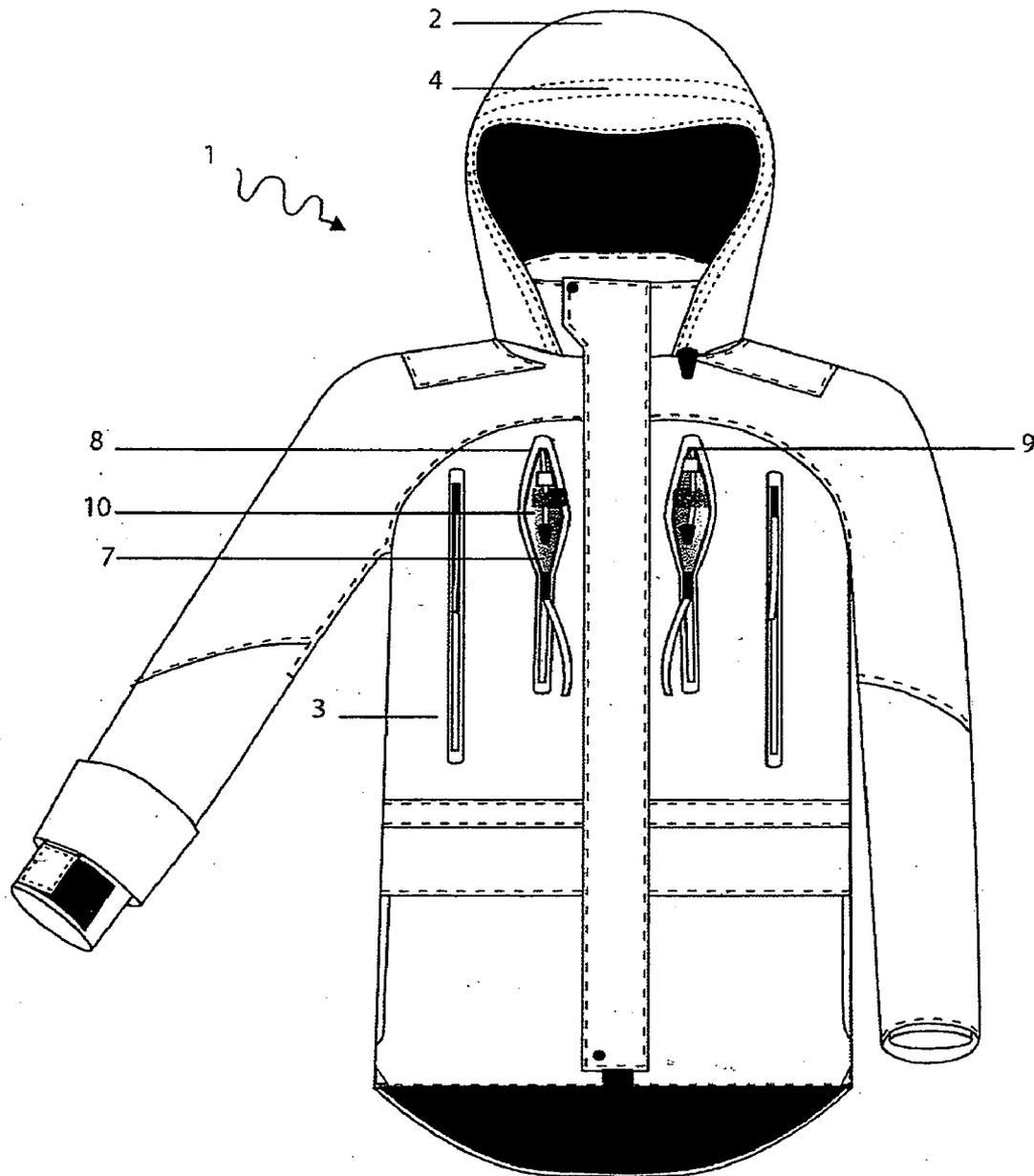


FIGURE 2

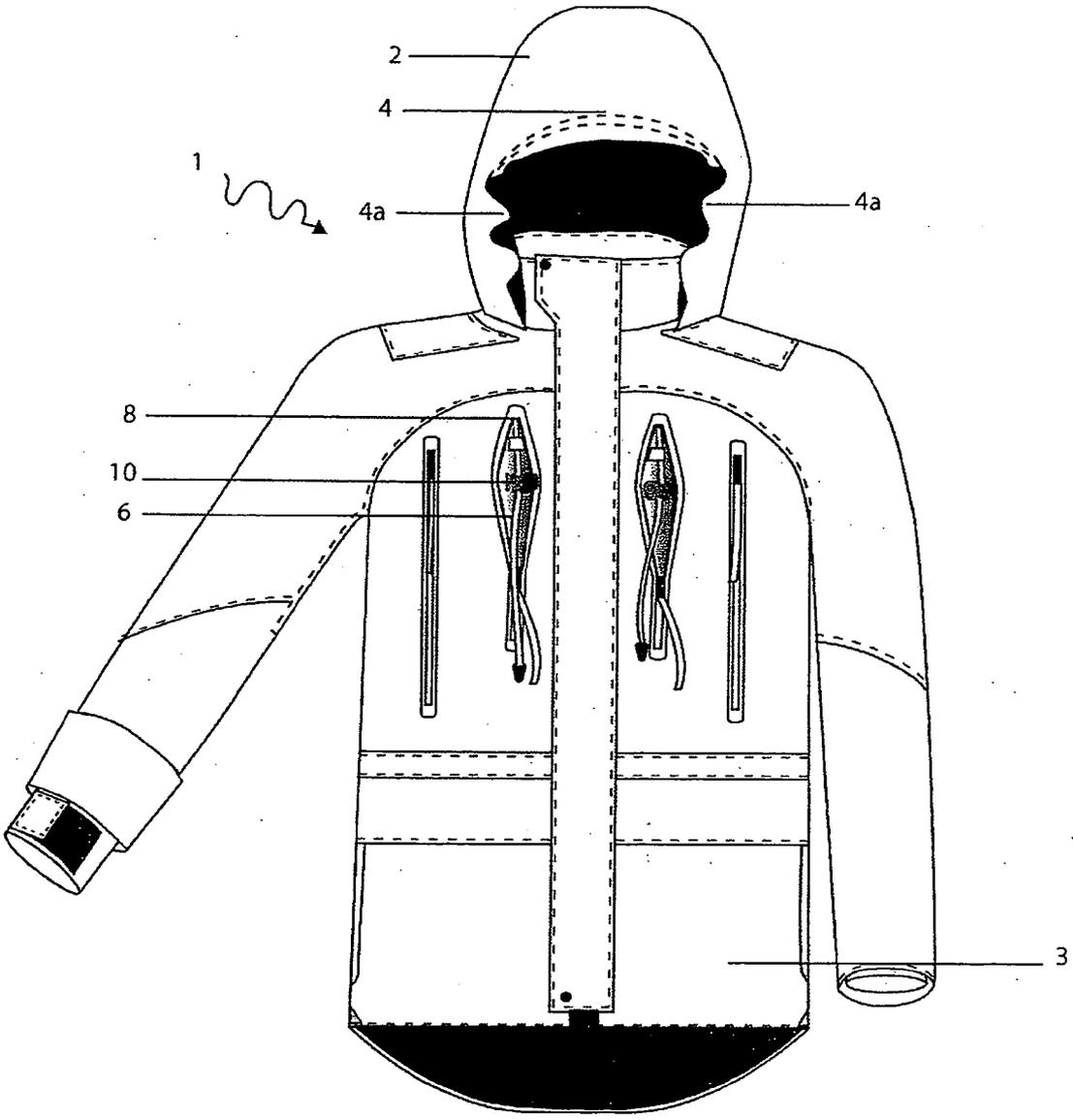


FIGURE 3

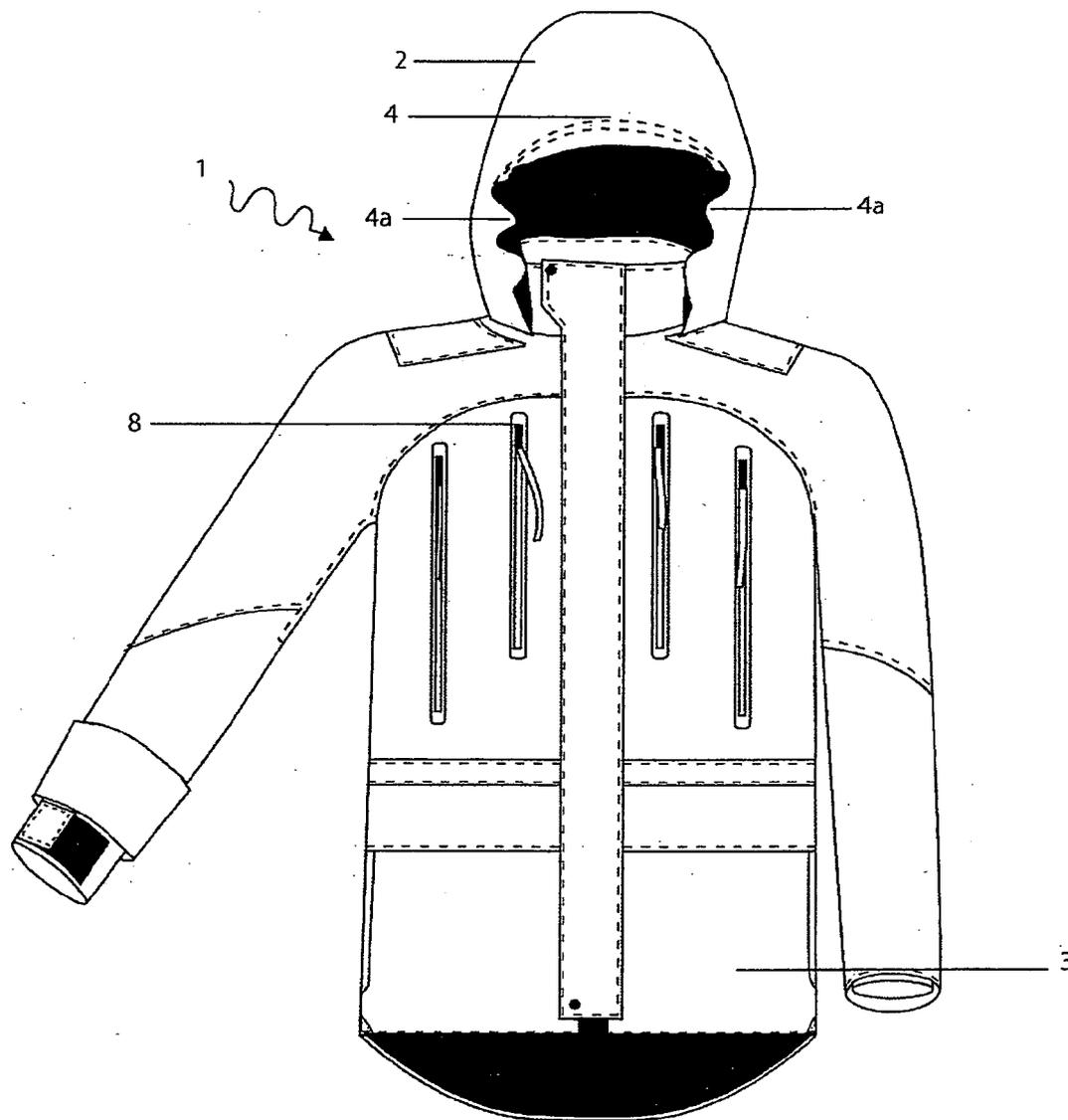


FIGURE 4

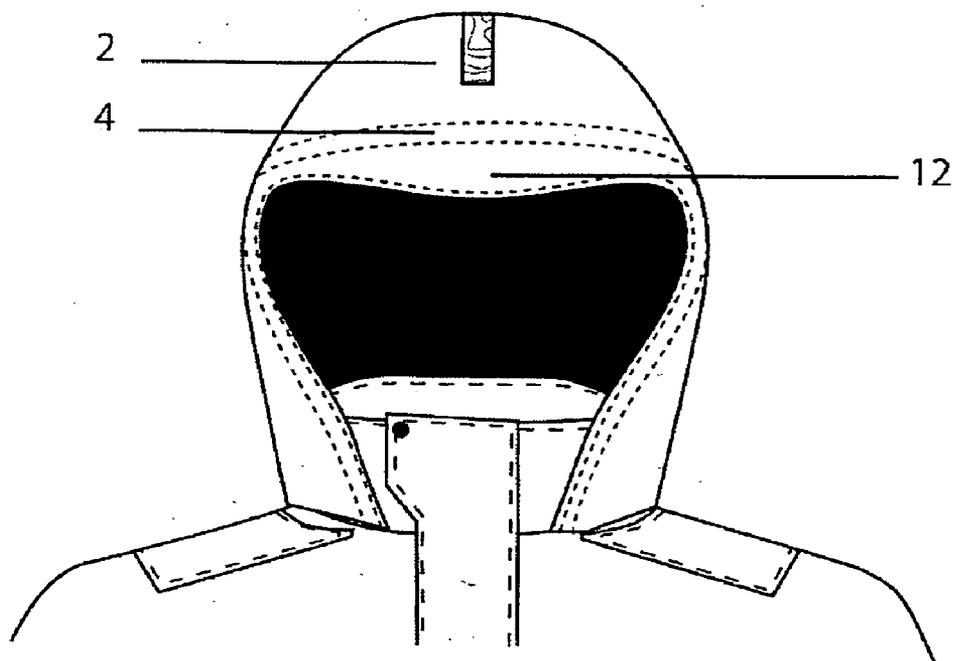


FIGURE 5

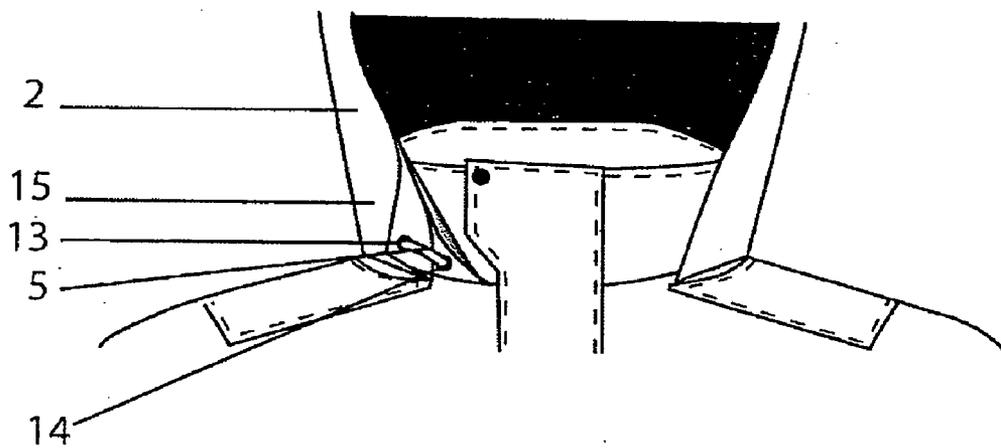


FIGURE 6

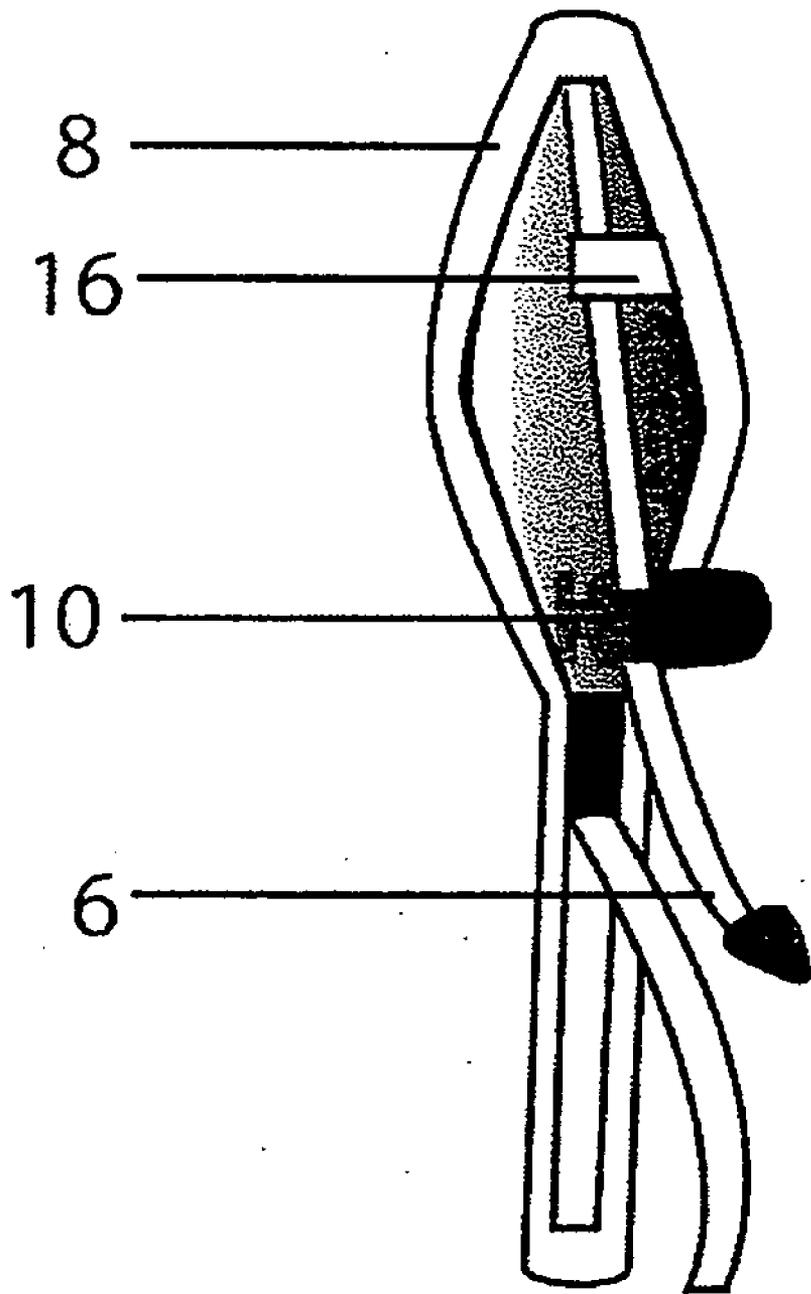


FIGURE 7

ADJUSTMENT MECHANISM

TECHNICAL FIELD

[0001] The invention relates to an adjustment mechanism. More specifically, the invention relates to a mechanism and method of adjusting, tightening and loosening a hood on a jacket or other item of clothing with a hood.

BACKGROUND ART

[0002] Existing designs of hoods incorporate a hem or channel on the hood peak that houses a cord such as elastic or cotton. The cord may be tightened to hold the hood in place on the wearer's head or loosened for a more relaxed fit.

[0003] Designs for this cord arrangement range typically entail the cord emerging from the hood or collar, typically around the neck region of the wearer. The cord may have toggle adjustment mechanisms at this emergence point to assist with fixing the cord in place against the hood or collar. The user adjusts the tightness of the hood across their forehead and/or cheeks by pulling the emerging cords and thereby constricting the hood opening. If toggles are present, the constricted hood may be held in place by adjusting the toggles along the cord to the tightened position. Where toggles are not present, the cords may be tied together under the user's chin to hold the hood in place or otherwise tied off.

[0004] A potential drawback of existing designs described above is that the cord emerges from the hood or collar and hangs on the exterior of the garment. The cord can therefore be caught on other items, for example, a pack, other carried equipment, or trees or other undergrowth through which the user moves. The amount of cord that may be caught on other objects increases when the hood is tightened, which is far from ideal as that is when the user typically has the least vision e.g. with the hood in a constricted position across the users face. In many cases this loose cord may simply be a nuisance although, items that can catch can result in the item of clothing being damaged e.g. ripped, or can even result in the user being snagged and thrown off balance.

[0005] A further drawback of the above designs is that the toggle adjustment mechanisms are typically small in order to avoid bulk this means that they may be cumbersome and difficult to use, particularly when the user is already wearing gloves and/or other equipment.

[0006] A yet further drawback is that the cords in the tightened position are not aesthetically pleasing with the cord either dangling around the users face or, if tied off, may be uncomfortable and constrict movement of the users head.

[0007] It would therefore be useful to have an alternative design that minimised the risk of catching, yet still allowed for easy adjustment by the user when the garment is worn, and is aesthetically pleasing.

[0008] It is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

[0009] All references, including any patents or patent applications cited in this specification are hereby incorporated by reference. No admission is made that any reference constitutes prior art. The discussion of the references states what their authors assert, and the applicants reserve the right to challenge the accuracy and pertinence of the cited documents. It will be clearly understood that, although a number of prior art publications are referred to herein, this reference does not

constitute an admission that any of these documents form part of the common general knowledge in the art, in New Zealand or in any other country.

[0010] It is acknowledged that the term 'comprise' may, under varying jurisdictions, be attributed with either an exclusive or an inclusive meaning. For the purpose of this specification, and unless otherwise noted, the term 'comprise' shall have an inclusive meaning—i.e. that it will be taken to mean an inclusion of not only the listed components it directly references, but also other non-specified components or elements. This rationale will also be used when the term 'comprised' or 'comprising' is used in relation to one or more steps in a method or process.

[0011] Further aspects and advantages of the present invention will become apparent from the ensuing description that is given by way of example only.

DISCLOSURE OF THE INVENTION

[0012] The invention broadly relates to an adjustment mechanism and method of reversibly tightening a garment hood onto a wearer's head.

[0013] For the purposes of this specification the term 'hood' and grammatical variations thereof refers to a head-covering portion of a garment.

[0014] The term 'garment' refers to shirts, vests, jackets and the like with a hood portion. One embodiment may be a rainwear jacket where the hood provides rain and wind protection to the user's head.

[0015] The term 'torso portion' refers to the body-covering portion of the garment below the neckline.

[0016] According to a first embodiment there is provided an adjustment mechanism including:

[0017] (a) a garment with a torso portion and a hood portion that at least partially covers a wearer's head;

[0018] (b) a cord securing portion on the hood portion;

[0019] (c) a hood cord that is received by the hood cord securing portion; and wherein the hood cord is reversibly tightened through at least one pocket located on the garment torso portion.

[0020] According to a second embodiment there is provided a method of reversibly tightening a hood on a garment by the step of pulling at least one cord ending located inside at least one pocket on the torso portion of a garment and, wherein the garment includes a hood portion and the cord ending or endings when pulled tighten the hood on the wearer's head.

[0021] In one embodiment, the garment is a jacket. Alternatively, the garment may be a shirt or other item of clothing that includes a hood. It should be appreciated that the adjustment mechanism of the present invention may be applied to a variety of garments, the main requirement being that the garment include a hood portion.

[0022] In the above embodiments, the hood, when tightened, encloses the user's head apart from a forward facing portion to allow the user to see and/or breathe. Partial head covering may also be possible without departing from the scope of this specification.

[0023] In one embodiment, the cord-securing portion is a hem or channel through which the cord is received. The cord may be free to move within the hem or instead may be fixed to the hem via a stitch or other means at one or more points. In order to have the cord constrict the opening against the user's face, the cord must be sufficiently free to move within the hem

so as to bunch up the hood thereby constricting the size of the hood opening against the user's face.

[0024] In one embodiment, the cord-receiving portion is situated so as to be located at the front or brim of the hood. In a further embodiment, the cord receiving portion is situated so as to be located in a position that, when tightened forms a seal around at least a portion of the user's face. The hood opening, when constricted via the adjustment mechanism, results in the hood being pulled against the users forehead and cheeks to form the seal.

[0025] In one embodiment the cord used may be elasticised although non-elasticised cords e.g. cotton, may also be used without departing from the scope of the invention. An advantage of using elasticised cord is that a tighter seal may be established against the user's face than may be the case when a non-elasticised cord is used.

[0026] In one embodiment, the cord includes at least one toggle located on the distil end or ends of the cord. Toggles in the context of this specification refer to a device that locks the cord in place against the garment to fix the cord in a tightened or loosened position. In one embodiment, the toggle may be a plastic cylindrical shape with a spring-loaded constriction that locks against the cord and is sufficiently large so as to be held against the garment fabric and not be carried through into the hem or other aperture(s). In preferred embodiments, the toggle or toggles are sufficiently large to be easily adjusted by the user when wearing gloves and/or other equipment.

[0027] In one embodiment, the distil end or ends of the cord or cords extend internally from the hood cord receiving portion through a garment collar and to a pocket or pockets located at the front of the torso portion of the garment when worn. It should be appreciated that this position is preferable for adjustment as the wearer can easily reach the cord distil ends and the cord ends are within the wearer line of vision. By contrast, neck based adjustment mechanisms used in the art are more difficult to reach and the tightening process is difficult to view visually by the user as the toggles are away from the wearer's line of sight. In addition, as the distil end or ends of the cord or cords are received within a pocket or pockets, they may be concealed within the pocket or pockets. This avoids the cord (or toggles if used) being caught on other objects. Concealing the cord or cords is also more aesthetically pleasing as the cord endings and any toggles if used are not visible once adjusted and the pocket closed.

[0028] In one embodiment, the garment includes two pockets located on the chest of the wearer enclosing each distil end of the cord. To use the adjustment mechanism, the user unzips the pocket or pockets and pulls the cord endings. Pulling the cord or cords tightens the hood without need to tighten any cords around the neck region of the user.

[0029] In one embodiment, the cord or cords extend from the cord-securing portion of the hood, through the garment collar, and then through the torso portion to the pocket or pockets. The cord or cords may also be enclosed between a garment liner layer and a garment exterior layer. Guiding regions may also be used between the liner and garment outer layer to retain the cord in a preferred position.

[0030] It should be appreciated from the above description that there is provided an adjustment mechanism that allows a hood to be reversibly tightened, is easy to access, is easy to use when the garment is worn, and which overcomes aesthetic issues in the art by concealing the cords, cord endings and toggles if used.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] Further aspects of the present invention will become apparent from the following description that is given by way of example only and with reference to the accompanying drawings in which:

[0032] FIG. 1 illustrates a front elevation of a jacket embodiment using the adjustment mechanism;

[0033] FIG. 2 illustrates a front elevation of a jacket embodiment using the adjustment mechanism with two front pockets unzipped exposing the cord endings and adjustment toggles;

[0034] FIG. 3 illustrates a front elevation of the front of the jacket embodiment with the hood in a tightened configuration;

[0035] FIG. 4 illustrates a front elevation of the front of the jacket embodiment with the hood in a tightened configuration and with the cord concealed within the pockets;

[0036] FIG. 5 illustrates a detailed elevation of the hood showing the exterior of the hem or channel that the cord passes through;

[0037] FIG. 6 illustrates a detailed elevation of the hood interior showing the cord transferring from the hood channel to the collar of the jacket; and,

[0038] FIG. 7 illustrates a detailed elevation of a cord ending including a toggle and guide as the cord emerges from a front pocket.

BEST MODES FOR CARRYING OUT THE INVENTION

[0039] The invention is now described with reference to a detailed description of an embodiment of the adjustment mechanism and a related method of use.

[0040] Referring to FIG. 1, a front elevation is shown of a jacket 1 including an embodiment of the adjustment mechanism. The jacket 1 includes a hood portion 2 which, when worn, covers the wearer's head (not shown). A torso portion 3 is also included. In the Figure shown, the hood portion 2 is in a loosened configuration.

[0041] The hood 2 includes a channel or hem 4 through which a cord 5 passes. Each cord ending 6,7 is concealed in two front facing pockets 8,9 located around the chest region of the wearer (not shown) when the jacket 1 is worn.

[0042] Referring to FIG. 2, the jacket 1 is shown with the two front pockets 8,9 in an opened position and the cord endings 6,7 and toggles 10,11 exposed.

[0043] FIG. 3 shows the same view as FIG. 2 however, the cord endings 6,7 have been pulled via the pockets 8,9 which in turn has tightened the hood 2 of the jacket 1 as illustrated by the bunching of material 4A observed in FIG. 3 around the forward facing portion of the hood 2. The toggles 10,11 have been moved to retain the cord endings 6,7 in a tightened position.

[0044] FIG. 4 shows the same hood 2 tightened view as FIG. 3 but with the cord endings 6,7 concealed within the two front pockets 8,9. As should be appreciated, this looks aesthetically cleaner than the case where the cord endings 6,7 are exposed and prevents the cords, cord endings 6,7 and toggles 10,11 from being caught on external objects.

[0045] FIG. 5 shows a detailed view of the hood 2 exterior and the exterior of the hem or channel 4 through which the cord (not shown) may pass. In the embodiment shown the cord passes through the front of the hood 2 although set back

slightly from the edge to allow a peak 12 to extend forwards from the hood 2 even when the hood 2 is in a tightened configuration.

[0046] FIG. 6 shows a detailed view of the hood 2 interior illustrating one embodiment to transfer the cord 5 from the hood 2 portion into the torso 3 portion, in this case via eyelets 13,14 between the hood 2 and collar 15 of the jacket 1. The cord 5 then extends into the torso 3 portion of the jacket 1 between a liner (not shown) and outer portion 3.

[0047] FIG. 7 illustrates a detail view of one cord ending 7 emerging out of an opened front pocket 9. As shown, the cord ending 7 emerges from the top of the pocket 9. A guide loop 16 may be used as shown in FIG. 7 to retain the cord ending 7. The embodiment shown also uses a toggle 11 that is a spring loaded cylinder that fixes to a point on the cord adjustable by the user.

[0048] The adjustment mechanism is used to tighten the hood 2 by the wearer unzipping the front pockets 8,9 and pulling on the cord endings 6,7 until the hood 2 is tightened around the wearers face (not shown). The wearer may set the degree of tightness although an aim is to form an approximate weather seal between the hood 2 and the wearer's face, in particular, the seal on wearer's forehead and/or cheeks. Once tightened, the toggles 10,11 may be moved to a point proximate the guide loop 16 to retain the cord 5 in the tightened position. The excess cord 5 and toggles 10,11 may then be tucked into the pockets 8,9 and the pockets 8,9 closed, for example, via a zip or Velcro™ closure. The method may be performed by a wearer using gloves or other movement restricting clothing or equipment as fine motor skills movements are not required. Also, as the pockets 8,9 are located around the chest of the wearer, adjustment can be completed within the wearer's field of vision further easing the adjustment process. Finally, as the cord 5 is fully concealed within the jacket 1 there are no parts that may be caught on other objects thereby avoiding potential damage to the jacket 1 or snagging on other objects.

[0049] Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the scope of the claims herein.

- 1. An adjustment mechanism including:
 - (a) a garment with a torso covering portion and a hood portion that at least partially covers a wearer's head;
 - (b) a cord securing portion on the hood portion;
 - (c) a hood cord that is received by the hood cord securing portion; and
 wherein the hood cord is reversibly tightened through at least one pocket located on the garment torso portion.
- 2. The adjustment mechanism as claimed in claim 1 wherein the garment is a jacket.
- 3. The adjustment mechanism as claimed in claim 1 wherein the hood, when tightened, encloses the user's head apart from a forward facing portion.

4. The adjustment mechanism as claimed in claim 1 wherein the cord-securing portion is a hem or channel through which the cord is received.

5. The adjustment mechanism as claimed in claim 1 wherein the cord securing portion is situated so as to be located at the front or brim of the hood.

6. The adjustment mechanism as claimed in claim 1 wherein the cord securing portion is situated so as to be located in a position that, when tightened forms a seal around at least a portion of the user's face.

7. The adjustment mechanism as claimed in claim 1 wherein the cord includes at least one toggle located on the distil end or ends of the cord.

8. The adjustment mechanism as claimed in claim 1 wherein the distil end or ends of the cord or cords extend internally from the hood cord securing portion through a garment collar and to a pocket or pockets located at the front of the torso portion of the garment when worn.

9. The adjustment mechanism as claimed in claim 1 wherein the garment includes two pockets located on the chest of the wearer enclosing each distil end of the cord.

10. The adjustment mechanism as claimed in claim 1 wherein the cord or cords extend from the cord-securing portion of the hood, through the garment collar, and then through the torso portion to the pocket or pockets.

11. A method of reversibly tightening a hood on a garment by the step of pulling at least one cord ending located inside at least one pocket on the torso portion of a garment and, wherein the garment includes a hood portion and the cord ending or endings when pulled tighten the hood against the wearer's head.

12. The method as claimed in claim 11 wherein the garment is a jacket.

13. The method as claimed in claim 11 wherein, the cord is situated within the hood so as to be located in a position that, when tightened forms a seal around at least a portion of the user's face.

14. The method as claimed in claim 11 a wherein the cord includes at least one toggle located on the distil end or ends of the cord.

15. The method as claimed in claim 11 wherein the end or ends of the cord or cords extend internally from the hood, through a garment collar, and to the pocket or pockets located on the torso portion of the garment when worn.

16. The method as claimed in claim 11 wherein the garment includes two pockets located on the chest of the wearer enclosing each ending of the cord.

17. The method as claimed in claim 11 wherein the cord or cords are retained between a garment liner and the garment exterior layer.

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