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(71) Applicant: **Shigemori Co., Ltd.**
Hiroshima 734-0022 (JP)

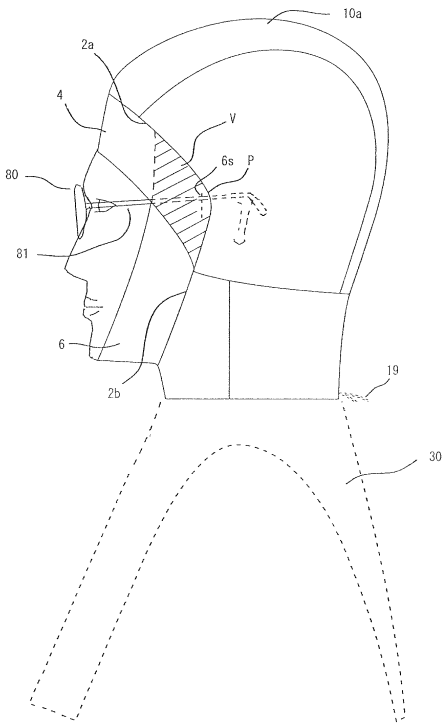
(72) Inventor: **SHIGEMORI Shin**
Hiroshima-shi
Hiroshima 734-0022 (JP)

(74) Representative: **Heubeck, Christian**
Weickmann & Weickmann
Postfach 860 820
81635 München (DE)

(54) **WORK HOOD**

(57) A work hood comprising: a work hood body 10 that covers a wearer's head and includes an opening 2; and a upper edging cloth 4 that is attached to the opening 2, wherein a patch 70 is joined so as to overlap on an inside or outside of both ends of the upper edging cloth, in an overlapping portion V, a plane of the patch and the upper edging cloth are partially not joined to each other, and a front edge 70f of the patch and the upper edging cloth are partially not joined to each other, and in an area of a part of the overlapping portion on one of the patch and the upper edging cloth, which is located inside of the other, and at a position on a rear side of the front edge of the patch, an insertion portion 6s is provided through which a temple 81 of glasses 80 of the wearer is inserted.

[Fig.3]



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Description

Field of the Invention

[0001] The present invention relates to a work hood (a cap) to be worn during work in clean rooms, food factories, and the like.

Description of the Related Art

[0002] During work in clean rooms, food factories, and the like, a worker wears a work hood (a cap) that covers his/her head to prevent foreign matter such as sweat and hair from dropping from his/her face. There has been known a technique of this work hood in which the work hood covers the wearer's head and includes an opening from which at least a part of his/her face is exposed, and further, upper and lower band-shaped stretch cloths are attached to a peripheral edge of the opening, and are closely fitted to the face, thereby preventing hair and the like from dropping from a gap between the opening and the face (Patent Literature 1).

[0003] Furthermore, in this technique, an insertion portion for inserting a temple of glasses worn by the worker is provided on the inner-surface side of a joint portion between an upper band-shaped cloth portion and a lower band-shaped cloth portion.

[0004] There has been known another technique of the work hood in which a side of a back-of-head cloth and a side edge of a forehead cloth are partially sewed to each other, thereby forming a slit-shaped gap, and this gap serves as an insertion portion through which a temple of glasses is inserted (Patent Literature 2).

Prior Art Literature

Patent Literature

[0005]

[Patent Literature 1] Japanese Unexamined Patent Application Publication No. 2006-22434 (claim 3 and Fig. 4)
[Patent Literature 2] Japanese Unexamined Patent Application Publication No. 2002-161424

Summary of the Invention

Problems to be solved by the Invention

[0006] Meanwhile, in the case of the above technique described in Patent Literature 1, a part (a front edge) of a rectangular cloth piece that constitutes the insertion portion is exposed to the outer side from the joint portion between the upper band-shaped cloth portion and the lower band-shaped cloth portion, and is widely opened. Therefore, there is a risk where hair and the like, coming off the wearer's head within the work hood, can pass from a temple of glasses through the insertion portion, and drop to the outside at the exposed portion of the rectangular cloth piece. Further, the rectangular cloth piece is attached across the upper band-shaped cloth portion and the lower band-shaped cloth portion, and a rear-end side of the rectangular cloth piece is widely opened. Therefore, there is a possibility where the temple of the glasses can move vertically on the rear-end side, and the glasses can slip off.

[0007] Furthermore, in the case of the technique described in Patent Literature 2, a slit itself that serves as the insertion portion is exposed to the outer side, and when a worker moves his/her head, an overlap at the slit that serves as the insertion portion opens, and therefore hair and the like, coming off the worker's head within the work hood, drop to the outside easily from the insertion portion.

[0008] That is, the present invention has been achieved to solve the above problems, and an object of the present invention is to provide a work hood that prevents foreign matter from dropping to the outside through an insertion portion.

Means for Solving the Problems

[0009] The present invention provides a work hood comprising:a work hood body that covers a wearer's head and includes an opening from which at least a part of a face of the wearer is exposed; and a band-shaped stretch upper edging cloth that is attached, on its own one long side, to an upper peripheral edge including an upper portion of the opening of the work hood body, wherein a patch is joined so as to overlap on an inside or outside of each of both ends of the upper edging cloth, in an overlapping portion where the patch and the upper edging cloth overlap each other, a plane of the patch and a plane of the upper edging cloth are at least partially not joined to each other, and a front edge

of the patch and the upper edging cloth are at least partially not joined to each other, and in an area of a part of the overlapping portion on one of the patch and the upper edging cloth, which is located inside of the other, and at a position on a rear side of the front edge of the patch, an insertion portion is provided through which a temple of glasses of the wearer is inserted after passing through the front edge of the patch in the overlapping portion.

[0010] With this configuration, a region from the front edge of the patch to the insertion portion that is a longitudinal region through which the temple of the glasses is inserted is the overlapping portion between the patch and the upper edging cloth. Therefore, the temple of the glasses is securely held in this overlapping portion. Accordingly, even when hair and the like come off the wearer's head within the work hood, and pass from the temple of the glasses through the insertion portion, both cloths (the patch and the upper edging cloth) of the overlapping portion hold in hair and the like, thereby preventing them from dropping to the outside.

[0011] Further, the insertion portion for inserting the temple of the glasses is provided within an area of the overlapping portion (that is, the dimension of the insertion portion is smaller than that of the overlapping portion, when viewed in the vertical direction). Therefore, the temple of the glasses is held within the insertion portion without moving vertically from the insertion portion, thereby preventing the glasses from slipping off. Furthermore, the insertion portion is provided on one of the patch and the upper edging cloth, which is located inside of the other. Therefore, the insertion portion is not exposed to the outside. Even when hair and the like come off and pass from the temple of the glasses through the insertion portion, the outside cloth can hold in hair and the like.

[0012] Preferably, the patch is joined so as to overlap on the inside of each of the ends of the upper edging cloth, and in an overlapping portion where the patch and the upper edging cloth overlap each other, the front edge of the patch is not exposed to the outside of the upper edging cloth.

[0013] With this configuration, a region of the overlapping portion from the front edge of the patch to the insertion portion that is a region through which the temple of the glasses is inserted is covered by the upper edging cloth. Therefore, the front edge of the patch and the insertion portion are not exposed to the outer side. Accordingly, even when hair and the like come off the wearer's head within the work hood, pass through the insertion portion, and then move to the front edge of the patch, the upper edging cloth holds in hair and the like, thereby preventing them from dropping to the outside. Further, the front edge of the patch is covered by the upper edging cloth, thereby reliably preventing hair and the like from dropping to the outside.

[0014] Further, the present invention provides a work hood comprising: a work hood body that covers a wearer's head and includes an opening from which at least a part of a face of the wearer is exposed; and a band-shaped stretch upper edging cloth that is attached, on its own one long side, to an upper peripheral edge including an upper portion of the opening of the work hood body, wherein the work hood further comprises a band-shaped stretch lower edging cloth that is attached, on its own one long side, to an area of the opening of the work hood body, which is located on a lower side of the upper peripheral edge, both ends of the lower edging cloth are respectively joined to both side portions of the opening, both ends of the upper edging cloth overlap respectively on the ends of the lower edging cloth, and in an overlapping portion where the upper edging cloth and the lower edging cloth overlap each other, the other long side of the lower edging cloth is not exposed to an outside of the upper edging cloth, in the overlapping portion, a plane of the lower edging cloth and a plane of the upper edging cloth are at least partially not joined to each other, and the other long side of the lower edging cloth and the other long side of the upper edging cloth are at least partially not joined to each other, and on a rear side of the other long side on each of the ends of the lower edging cloth, and in a part of the overlapping portion, an insertion portion is provided through which a temple of glasses of the wearer is inserted after passing through the other long side of the lower edging cloth in the overlapping portion.

[0015] With this configuration, the lower edging cloth also serves as the patch, and therefore it suffices that the insertion portion is formed on a part of the lower edging cloth. Accordingly, a patch as an additional member for inserting the temple of the glasses is not necessary, and consequently the number of members and the amount of sewing work are reduced, and a reduction in cost is achieved.

[0016] Preferably, the work hood body includes a substantially-cylindrical neck cloth that covers at least a neck of the wearer, and that constitutes at least a part of the lower peripheral edge of the opening, and two top holding cloths that constitute at least a part of the upper peripheral edge of the opening, pass through a top, and are joined to the neck cloth at the neck or a back of the head, and that are divided along a center line in a vertical direction.

[0017] With this configuration, the top holding cloths cover the wearer's hair-growing area continuously from the forehead via the top of the head to at least the back of the head without having any sewed seam. Therefore, even when the wearer's head moves during work, the top holding cloths follow this movement, thereby preventing foreign matter such as hair from dropping from the face, and also reducing discomfort during wearing. Further, the top holding cloths are separated from each other laterally with respect to the center line. Therefore, the top holding cloths can cover the wearer's head three-dimensionally, and reduce discomfort during wearing also in this respect.

[0018] Furthermore, the top holding cloths cover the wearer's head from the forehead via the top of the head to at least the back of the head without having any sewed seam, thereby providing a better fit to the head. Also, it is not necessary to arrange an adjustment rubber or the like to be fitted to the wearer's head at the position of the top holding

cloths, thereby preventing discomfort for the head and allowing the wearer to work for a longer period of time, as well as achieving a reduction in cost and weight.

[0019] Preferably, the neck cloth is formed up to a height of an intersection of the upper peripheral edge and the lower peripheral edge.

[0020] With this configuration, the top holding cloths and the neck cloth are sewed to each other substantially at the height of the wearer's ears, and the top holding cloths cover the wearer's head including the back of the head without having any sewed seam.

[0021] Preferably, the work hood further comprises two side-of-head holding cloths that are positioned between the neck cloth and the top holding cloths, and are joined thereto, and that constitute a part of the upper peripheral edge of the opening and a part of the lower peripheral edge of the opening,

[0022] With this configuration, the side-of-head holding cloths are interposed between the neck cloth and the top holding cloths, when viewed in the height direction. Accordingly, the height of the neck cloth is reduced. The top holding cloths continuously cover the wearer's hair-growing area from the forehead via the top of the head to the nape without having any sewed seam. Further, the top holding cloths are separated from each other laterally with respect to the center line, and are also respectively joined to the side-of-head holding cloths that cover the side of the wearer's head. Therefore, the top holding cloths can cover the wearer's head three-dimensionally, and reduce discomfort during wearing also in this respect.

[0023] When the neck cloth, the top holding cloths, and the side-of-head holding cloths are sewed to each other by double-sided decorative stitches, discomfort, caused by sewed seams, during wearing can be reduced.

[0024] When an adjustment belt is provided on the neck cloth along the circumferential direction, the diameter of the neck cloth is decreased by pulling the adjustment belt. Therefore, foreign matter can be prevented from dropping from the neck.

[0025] Preferably, the top holding cloths and the side-of-head holding cloths are made from a mesh material, and the work hood further comprises a cover that detachably covers the top holding cloths and the side-of-head holding cloths.

[0026] As described above, because the top holding cloths and the side-of-head holding cloths, which are made from a mesh material, have better breathability, a wearer can withstand wearing for a longer period of time. Although hair can sometimes pass through the mesh material, and come out or drop to the outside, such a problem can be prevented by detachably attaching the cover so as to cover the mesh material.

Effect of the Invention

[0027] According to the present invention, a work hood that can provide an insertion portion for a temple of glasses without increasing the number of members, and that prevents foreign matter from dropping to the outside through the insertion portion can be obtained.

Brief Description of the Drawings

[0028]

Fig. 1 is a front view of a work hood according to a first embodiment of the present invention;
Fig. 2 is a side view of the work hood according to the first embodiment;
Fig. 3 is a side view of the work hood according to the first embodiment at the time of wearing glasses;
Fig. 4 is a top view of the work hood according to the first embodiment;
Fig. 5 is a rear view of the work hood according to the first embodiment;
Fig. 6 is a plan view showing the shape of a slit of the work hood according to the first embodiment of the present invention, when viewed from the inside of the work hood;
Figs. 7 show a work hood in which each of top holding cloths and each of side-of-head holding cloths are made from a mesh material, and show a state where the mesh material is covered by a cover (a woven cloth), respectively;
Fig. 8 is a front view of a work hood according to a second embodiment of the present invention;
Fig. 9 is a side view of the work hood according to the second embodiment;
Fig. 10 is a top view of the work hood according to the second embodiment;
Fig. 11 is a rear view of the work hood according to the second embodiment;
Fig. 12 is a bottom view of the work hood according to the first embodiment;
Fig. 13 is a bottom view of the work hood according to the second embodiment;
Fig. 14 is a plan view showing a state where a temple of glasses is inserted through the slit, when viewed from the inside of the work hood according to the first embodiment;
Fig. 15 is a plan view showing a state where the temple of the glasses is inserted through a notched portion when the notched portion is provided as an insertion portion, instead of the slit in Fig. 14;

Fig. 16 is a front view of a work hood according to a third embodiment of the present invention;
Fig. 17 is a side view of the work hood according to the third embodiment of the present invention;
Fig. 18 is a plan view showing a state where the temple of the glasses is inserted through an insertion portion, when viewed from the inside of the work hood;
Fig. 19 is a front view of a work hood according to a fourth embodiment of the present invention;
Fig. 20 is a side view of the work hood according to the fourth embodiment of the present invention; and
Fig. 21 is a plan view showing a state where the temple of the glasses is inserted through an insertion portion, when viewed from the inside of the work hood.

Description of the Embodiments

[0029] A work hood according to an embodiment of the present invention is described below.

[0030] Fig. 1 is a front view of a work hood 100 according to a first embodiment of the present invention. Fig. 2 is a side view of the work hood 100. Fig. 3 is a side view of the work hood 100 at the time of wearing glasses. Fig. 4 is a top view of the work hood 100. Fig. 5 is a rear view of the work hood 100.

[0031] As shown in Figs. 1 and 2, the work hood 100 is formed into a cap shape that covers the wearer's head and neck, and includes a work hood body 10 that includes an opening 2 from which at least a part of the wearer's face is exposed, a band-shaped stretch upper edging cloth 4 that is attached to an upper peripheral edge 2a of the opening 2, and a band-shaped stretch lower edging cloth 6 that is attached to an area (hereinafter, referred to as "lower peripheral edge") 2b of the opening 2, which is located on the lower side of the upper peripheral edge 4. The wearer's face (usually, eyes, nose, and mouth) can be exposed from the opening 2.

[0032] The work hood body 10 includes a substantially-cylindrical neck cloth 18 that covers the wearer's neck, two top holding cloths 11 and 12 that extend from a central part of the upper peripheral edge 2a of the opening 2 through a top portion 10a (see Figs. 2 and 4), and are joined to the neck cloth 18, and two side-of-head holding cloths 13 and 14 that are positioned between the neck cloth 18 and the top holding cloths 11 and 12 and are joined to them, and that cover the side of the wearer's head laterally.

[0033] The work hood body 10 is formed by sewing the neck cloth 18, the top holding cloths 11 and 12, and the side-of-head holding cloths 13 and 14 to each other, each of which is made from a breathable, permeable sheet material (for example, a knitted material).

[0034] When viewed from the side, the upper peripheral edge 2a and the lower peripheral edge 2b of the opening 2 intersect at a "V"-shaped intersection P (see Fig. 2) near the wearer's temple.

[0035] The two top holding cloths 11 and 12 have a band shape, and are divided along a center line L extending in the vertical direction. Further, when the work hood 100 is viewed from the front, each of the top holding cloths 11 and 12 is formed to the side making an angle of approximately 30 degrees relative to the center line L. Furthermore, when viewed from the side (see Fig. 2), an upper end of the neck cloth 18 is formed into a triangle, and a front side of the triangle defines a lower portion of the lower peripheral edge 2b.

[0036] Meanwhile, the side-of-head holding cloths 13 and 14 are formed into an arc shape along respective side edge portions of the top holding cloths 11 and 12, and have a shape extending along respective edge portions of the upper peripheral edge 2a, the lower peripheral edge 2b, and the neck cloth 18. The side-of-head holding cloths 13 and 14 cover the side of the wearer's head including ears.

[0037] As described above, the top holding cloths 11 and 12 cover the wearer's hair-growing area continuously from the forehead via the top of the head to the nape without having any sewed seam. Therefore, even when the wearer's head moves during work, the top holding cloths 11 and 12 follow this movement, thereby preventing foreign matter such as hair from dropping from the face, and also reducing discomfort during wearing (see Figs. 4 and 5). The top holding cloths 11 and 12 are separated from each other laterally with respect to the center line L, and are also respectively joined to the side-of-head holding cloths 13 and 14 that cover the side of the wearer's head. Therefore, the top holding cloths 11 and 12 can cover the wearer's head three-dimensionally, and reduce discomfort during wearing also in this respect.

[0038] The upper edging cloth 4 and the lower edging cloth 6 are formed of a band-shaped member of a stretch knitted material woven into a net, for example. One long side 4i of the upper edging cloth 4 and one long side 6i of the lower edging cloth 6 are joined (sewed) respectively to the upper peripheral edge 2a and the lower peripheral edge 2b in an unstretched state.

[0039] Therefore, during wearing of the work hood 100, the upper edging cloth 4 and the lower edging cloth 6 expand or contract according to the size and shape of the wearer's face, and are closely fitted to the wearer's face. Accordingly, even when the wearer's head moves during work, the upper edging cloth 4 and the lower edging cloth 6 follow this movement, thereby preventing foreign matter such as hair from dropping from the face.

[0040] The upper edging cloth 4 is closely fitted from the wearer's forehead to the vicinity of the temples. The lower edging cloth 6 is closely fitted from the vicinity of the temples to the jaw. In an example in Fig. 1, the upper edging cloth 4 is three-dimensionally sewed at sewed seams 4x at the same positions as a seam S between the top holding cloth

11 and the side-of-head holding cloth 13 and as a seam S between the top holding cloth 12 and the side-of-head holding cloth 14, thereby providing a better fit.

[0041] As shown in Fig. 2, the upper edging cloth 4 extends downward into an arc shape from the wearer's forehead toward the temples, and both ends 4e of the upper edging cloth 4 are joined to both side portions of the opening 2 (near the intersection P). More specifically, each of the ends 4e of the upper edging cloth 4 is attached, on the one long side 4i, to the upper peripheral edge 2a of the opening 2, and is attached, at its distal-end portion (a short side of the upper edging cloth 4), to an area extending from the intersection P to the lower peripheral edge 2b.

[0042] In contrast, the lower edging cloth 6 extends upward into an arc shape from the wearer's jaw toward the temples, and both ends 6e of the lower edging cloth 6 are joined respectively to the side portions of the opening 2 (the intersection P). More specifically, each of the ends 6e of the lower edging cloth 6 is attached, on one long side 6i, to the lower peripheral edge 2b of the opening 2, and is attached, at its distal-end portion (a short side of the lower edging cloth 6), to an area extending from the intersection P to the upper peripheral edge 2a.

[0043] As shown in Fig. 2, the ends 4e of the upper edging cloth 4 overlap on the ends 6e of the lower edging cloth 6, respectively, and in an overlapping portion V (hatching in Fig. 2), the other long side 6f (a broken-line part in Fig. 2) of the lower edging cloth 6 is not exposed to the outside of the upper edging cloth 4, and is covered by the upper edging cloth 4.

[0044] In the overlapping portion V, the plane of the lower edging cloth 6 and the plane of the upper edging cloth 4 are not joined to each other, and the other long side 6f of the lower edging cloth 6 and the other long side 4f of the upper edging cloth 4 are not joined to each other. Therefore, the other long side 6f (the broken-line part in Fig. 2) of the lower edging cloth 6 is open toward the front, while allowing a temple 81 of wearer's glasses 80 to be inserted through this opening.

[0045] A slit (insertion portion) 6s extending in the vertical direction is formed in a part of the overlapping portion V (slightly in front of the intersection P in Fig. 2) on each of the ends 6e of the lower edging cloth 6. Therefore, it is possible to insert the temple 81 of the glasses 80 from the other long side 6f (the broken-line part in Fig. 2) of the lower edging cloth 6 through the slit 6s (see Fig. 3).

[0046] As described above, it suffices that the slit (insertion portion) 6s is formed on a part of the lower edging cloth 6. Therefore, a patch as an additional member for inserting a temple of glasses is not necessary, and accordingly the number of members and the amount of sewing work are reduced, and a reduction in cost is achieved. In contrast to that, in the case of the above technique described in Patent Literature 1, a rectangular cloth piece is sewed to the inner side of a joint portion where an upper band-shaped cloth portion and a lower band-shaped cloth portion overlap each other at both ends thereof (near the wearer's temples), and a gap between this joint portion and the rectangular cloth piece serves as an insertion portion through which a temple of glasses is inserted. Therefore, the rectangular cloth piece needs to be prepared in addition to the upper band-shaped cloth portion and the lower band-shaped cloth portion. Accordingly, the number of members and the amount of sewing work are increased, which leads to an increase in cost.

[0047] Further, in the present embodiment, the upper edging cloth 4 overlaps on the lower edging cloth 6. Therefore, an area of the overlapping portion, which extends from the other long side 6f (the broken-line part in Fig. 2) to the insertion portion 6s, that is a region through which the temple 81 of the glasses 80 is inserted is blocked by the upper edging cloth 4, and is not exposed to the outer side. Accordingly, even when hair and the like come off the wearer's head within the work hood, pass through the insertion portion 6s, and then move to the other long side 6f in the overlapping portion, the upper edging cloth 4 holds in hair and the like, thereby preventing them from dropping to the outside.

[0048] Fig. 6 is a plan view showing the shape of the slit 6s when viewed from the inside of the work hood. In this example, the slit 6s extends in the vertical direction, and is provided in an arc shape with its front side protruding. Preferably, the slit 6s is provided in an arc shape because a temple of glasses passes through the slit 6s more smoothly upon being inserted therethrough, as compared to merely a straight slit.

[0049] In the present embodiment, seams S between the top holding cloths 11 and 12, the side-of-head holding cloths 13 and 14, the neck cloth 18, the upper edging cloth 4, and the lower edging cloth 6 are sewed to each other by double-sided decorative stitches in order to prevent discomfort, caused by sewed seams, during wearing. However, the sewing method is not limited thereto, and may be normal lockstitches, for example.

[0050] An adjustment belt 19 is sewed to the inside of the bottom of the neck cloth 18 along the circumferential direction. The diameter of the neck cloth 18 is decreased by pulling the adjustment belt 19, and therefore foreign matter can be prevented from dropping from the neck.

[0051] Further, a cape cloth 30 that covers from the vicinity of the wearer's neck to the shoulders may be provided below the neck cloth 18. The cape cloth 30 is formed to spread out like a skirt. The cape cloth 30 may be formed integrally with the neck cloth 18 from one-piece cloth, or may be sewed to the neck cloth 18.

[0052] As shown in Fig. 7(a), the top holding cloths 11 and 12 and the side-of-head holding cloths 13 and 14 may be made from a mesh material. Because the top holding cloths 11 and 12 and the side-of-head holding cloths 13 and 14, which are made from a mesh material, have better breathability, a wearer can withstand wearing for a longer period of time. However, hair can sometimes pass through the mesh material, and come out or drop to the outside. Therefore,

as shown in Fig. 7(b), the top holding cloths 11 and 12 and the side-of-head holding cloths 13 and 14 are desirably covered with a cover (a woven cloth) 20.

[0053] Figs. 7 show the right-side view of a work hood. Fig. 7(a) only shows the top holding cloth 12 and the side-of-head holding cloth 14 among the top holding cloths 11 and 12 and the side-of-head holding cloths 13 and 14. In Fig. 7(b), the cover (the woven cloth) 20 completely covers the top holding cloth 12, the side-of-head holding cloth 14, and the neck, and an edge of the upper edging cloth 4 and an edge of the lower edging cloth 6 extend to the outside of the cover (the woven cloth) 20.

[0054] Next, a work hood 110 according to a second embodiment of the present invention is described.

[0055] Fig. 8 is a front view of the work hood 110 according to the second embodiment of the present invention. Fig. 9 is a side view of the work hood 110. Fig. 10 is a top view of the work hood 110. Fig. 11 is a rear view of the work hood 110.

[0056] The work hood 110 is the same as the work hood 100 according to the first embodiment of the present invention, except that the work hood 110 does not include any side-of-head holding cloth. Therefore, the same constituent elements are designated by the same reference numerals, and descriptions thereof are omitted.

[0057] As shown in Figs. 8 and 9, the work hood 110 is formed into a cap shape that covers the wearer's head and neck, and includes the upper edging cloth 4 and the lower edging cloth 6. However, the sewed seams 4x in Fig. 1 are not provided in the upper edging cloth 4.

[0058] A work hood body 10b of the work hood 110 includes a substantially-cylindrical neck cloth 18b that covers the wearer's neck, and two top holding cloths 11b and 12b that extend from a center part of the upper peripheral edge 2a of the opening 2 through the top portion 10a (see Figs. 9 and 10), and are joined to the neck cloth 18b.

[0059] The neck cloth 18b is formed to extend beyond the wearer's neck up to the height of the intersection P of the upper peripheral edge 4 and the lower peripheral edge 6 (that is, substantially up to the upper end of the wearer's ear). Each of the top holding cloths 11b and 12b is sewed to an upper end of the neck cloth 18b at the seam S.

[0060] The cape cloth 30 in Fig. 1 is not provided below the neck cloth 18b. A lower end of the neck cloth 18b extends slightly more downward on its front side than its back side, and covers as far down as the base of the wearer's neck. A sewed seam is provided along the center line L on the back side of the neck cloth 18b (see Fig. 11).

[0061] Also in the work hood 110, it suffices that the slit (insertion portion) 6s is formed on a part of the lower edging cloth 6. Therefore, a patch as an additional member for inserting a temple of glasses is not necessary, and accordingly the number of members and the amount of sewing work are reduced, and a reduction in cost is achieved. Further, because the upper edging cloth 4 overlaps on the lower edging cloth 6, the insertion portion 6s provided on the lower edging cloth 6 is blocked by the upper edging cloth 4, and is not exposed to the outer side. Therefore, even when hair and the like come off the wearer's head within the work hood, and pass through the insertion portion 6s, the upper edging cloth 4 holds in hair and the like, thereby preventing them from dropping to the outside.

[0062] Fig. 12 shows a bottom view of the work hood 100 according to the first embodiment. Fig. 13 shows a bottom view of the work hood 110 according to the second embodiment.

[0063] Fig. 14 is a plan view showing a state where the temple 81 of glasses is inserted through the slit 6s, when viewed from the inside of the work hood 100 according to the first embodiment.

[0064] Fig. 15 is a plan view showing a state where the temple 81 of the glasses is inserted through a notched portion 6t1 when the notched portion 6t1 is provided as an insertion portion, instead of the slit 6s in Fig. 14. In both Figs. 14 and 15, the other long side 6f of the lower edging cloth 6 is opened toward the front, and the temple 81 of the wearer's glasses 80 can be inserted from this opening through the slit 6s or the notched portion 6t1.

[0065] In Fig. 15, the lower edging cloth 6 is notched, at the notched portion 6t1 on the one long side 6i, into an arc shape that is recessed toward the front, and the upper edging cloth 4 is exposed from a hatching portion H at the rear of the notched portion 6t1 (on the right side in Fig. 15). Preferably, the notched portion 6t1 is provided because the temple 81 of the glasses passes through the notched portion 6t1 more smoothly, and is more easily inserted through and removed from the notched portion 6t1, as compared to the slit 6s.

[0066] Next, a work hood 200 according to a third embodiment of the present invention is described.

[0067] Fig. 16 is a front view of the work hood 200 according to the third embodiment of the present invention. Fig. 17 is a side view of the work hood 200. Fig. 18 is a plan view showing a state where the temple 81 of the glasses is inserted through an insertion portion 6t2, when viewed from the inside of the work hood 200.

[0068] The work hood 200 is formed into a cap shape that covers the wearer's head via the face to the shoulders, chest and back, and includes a work hood body 210 that includes the opening 2 from which at least a part of the wearer's face is exposed, a band-shaped stretch upper edging cloth 40 that is attached to the upper peripheral edge 2a of the opening 2, and a band-shaped stretch lower edging cloth 60 that is attached to the lower peripheral edge 2b of the opening 2. The wearer's face (usually, eyes, nose, and mouth) can be exposed from the opening 2.

[0069] The work hood body 210 includes apron-like front hanging portions 211 and 212 that extend from the shoulders to the chest, and are divided at the center. Both the front hanging portions 211 and 212 partially face each other in order that the front hanging portion 211 on the left side is positioned outside of (above and in front of) the front hanging portion 212, and a protruding portion on a left collar is engaged with a hole on a right collar for wear. Further, an apron-like back

hanging portion 213 is formed from the shoulders to the back. When both the front hanging portions 211 and 212 partially face each other as described above, the opening 2 surrounds the face. Therefore, in the work hood 200, there are two lower peripheral edges 2b on the left and right side, and two lower edging cloths 60 are provided on the left and right side.

[0070] Further, a brim 215 is sewed to the top of the upper edging cloth 40.

[0071] As shown in Fig. 17, when viewed from the side, the upper peripheral edge 2a and the lower peripheral edge 2b of the opening 2 intersect at the "V"-shaped intersection P (see Fig. 18) near the wearer's temple. The upper edging cloth 40 and the lower edging cloth 60 are formed of a band-shaped member of a stretch knitted material woven into a net, for example. One long side 40i of the upper edging cloth 40 and one long side 60i of the lower edging cloth 60 are joined (sewed) respectively to the upper peripheral edge 2a and the lower peripheral edge 2b in an unstretched state.

[0072] Therefore, during wearing of the work hood 200, the upper edging cloth 40 and the lower edging cloth 60 expand or contract according to the size and shape of the wearer's face, and are closely fitted to the wearer's face. Accordingly, even when the wearer's head moves during work, the upper edging cloth 40 and the lower edging cloth 60 follow this movement, thereby preventing foreign matter such as hair from dropping from the face.

[0073] The upper edging cloth 40 is closely fitted from the wearer's forehead to the vicinity of the temples. The lower edging cloths 60 are closely fitted from the vicinity of the temples to the cheeks.

[0074] The upper edging cloth 40 extends downward from the wearer's forehead toward the temples, and both ends 40e of the upper edging cloth 40 are joined to both side portions of the opening 2 (near the intersection P). More specifically, each of the ends 40e of the upper edging cloth 40 is attached, on the one long side 40i, to the upper peripheral edge 2a of the opening 2, and is attached, at its distal-end portion (a short side of the upper edging cloth 40), to an area extending from the intersection P to the lower peripheral edge 2b.

[0075] In contrast, the lower edging cloths 60 extend upward from the wearer's cheeks toward the temples, and both ends 60e of the lower edging cloths 60 are joined respectively to the side portions of the opening 2 (the intersection P). More specifically, each of the ends 60e of the lower edging cloths 60 is attached, on the one long side 60i, to the lower peripheral edge 2b of the opening 2, and is attached, at its distal-end portion (a short side of the lower edging cloth 60), to an area extending from the intersection P to the upper peripheral edge 2a.

[0076] The ends 40e of the upper edging cloth 40 overlap on the ends 60e of the lower edging cloths 60, respectively, and in the overlapping portion V, the other long side 60f (a broken-line part in Fig. 17) of the lower edging cloth 60 is not exposed to the outside of the upper edging cloth 40, and is covered by the upper edging cloth 40.

[0077] In the overlapping portion V, the plane of the lower edging cloth 60 and the plane of the upper edging cloth 40 are not joined to each other, and the other long side 60f of the lower edging cloth 60 and the other long side 40f of the upper edging cloth 40 are not joined to each other. Therefore, the other long side 60f (the broken-line part in Fig. 17) of the lower edging cloth 60 is open toward the front, while allowing the temple 81 of the wearer's glasses 80 to be inserted through this opening.

[0078] A notched portion (insertion portion) 6t2 extending in the vertical direction is formed in a part of the overlapping portion V (slightly in front of the intersection P in Fig. 17) on each of the ends 60e of the lower edging cloths 60. Therefore, it is possible to insert the temple 81 of the glasses 80 from the other long side 60f (the broken-line part in Fig. 17) of the lower edging cloth 60 through the notched portion 6t2 (see Fig. 18).

[0079] The notched portion 6t2 is the same as the notched portion 6t1 in Fig. 15.

[0080] Fig. 18 is a plan view showing a state where the temple 81 of the glasses is inserted through the notched portion 6t2, when viewed from the inside of the work hood 200. Similarly to the notched portion 6t1 in Fig. 15, the other long side 60f of the lower edging cloth 60 is opened toward the front, and the temple 81 of the wearer's glasses 80 can be inserted from this opening through the notched portion 6t2.

[0081] Next, a work hood 300 according to a fourth embodiment of the present invention is described.

[0082] Fig. 19 is a front view of the work hood 300 according to the fourth embodiment of the present invention. Fig. 20 is a side view of the work hood 300. Fig. 21 is a plan view showing a state where the temple 81 of the glasses is inserted through an insertion portion 6t3, when viewed from the inside of the work hood 300.

[0083] The work hood 300 is formed into a cap shape that covers the wearer's head via the face to the shoulders, chest and back, and includes a work hood body 310 that includes the opening 2 from which at least a part of the wearer's face is exposed, a band-shaped stretch upper edging cloth 41 that is attached to the upper peripheral edge 2a of the opening 2, and a patch 70 that is jointed (sewed) to an outer surface (outside) of the upper edging cloth 41. The wearer's face (usually, eyes, nose, and mouth) can be exposed from the opening 2.

[0084] In the work hood 300, the lower edging cloth 60 is not attached to the lower peripheral edge 2b of the opening 2.

[0085] The work hood body 310 includes apron-like front hanging portions 311 and 312 that extend from the shoulders to the chest, and are divided at the center. Both the front hanging portions 311 and 312 partially face each other in order that the front hanging portion 311 on the left side is positioned outside of (above and in front of) the front hanging portion 312, and a protruding portion on a left collar is engaged with a hole on a right collar for wear. Further, an apron-like back hanging portion 313 is formed from the shoulders to the back. When both the front hanging portions 311 and 312 partially face each other as described above, the opening 2 surrounds the face. Accordingly, in the work hood 300, there are

two lower peripheral edges 2b on the left and right side.

[0086] Further, a brim 315 is sewed to the top of the upper edging cloth 41.

[0087] As shown in Fig. 20, when viewed from the side, the upper peripheral edge 2a of the opening 2 is curved from the wearer's forehead toward the temples. The upper edging cloth 41 is formed of a band-shaped member of a stretch knitted material woven into a net, for example. One long side 41i of the upper edging cloth 41 is joined (sewed) to the upper peripheral edge 2a in an unstretched state.

[0088] Therefore, during wearing of the work hood 300, the upper edging cloth 41 expands or contracts according to the size and shape of the wearer's face, and is closely fitted to the wearer's face. Accordingly, even when the wearer's head moves during work, the upper edging cloth 41 follows this movement, thereby preventing foreign matter such as hair from dropping from the face.

[0089] Respective front edges of the lower peripheral edges 2b extend downward substantially vertically from the vicinity of the wearer's temples to the cheeks, while connecting to the other long side 41f of the upper edging cloth 41.

[0090] More specifically, each of both ends of the upper edging cloth 41 is attached, on the one long side 41i, to the upper peripheral edge 2a of the opening 2, and is sewed, at its distal-end part (a short side of the upper edging cloth 41), to the work hood body 310.

[0091] Patches 70 (Fig. 20 only shows a left-side patch among two patches) are sewed so as to respectively overlap on the outside of both ends 41e of the upper edging cloth 41, thereby forming the overlapping portion V with the upper edging cloth 41. A front edge 70f of the patch 70 extends substantially vertically.

[0092] In the overlapping portion V, the plane of the patch 70 and the plane of the upper edging cloth 41 are not joined to each other, and the front edge 70f of the patch 70 and the upper edging cloth 41 are not joined to each other. Therefore, the front edge 70f of the patch 70 is opened toward the front, while allowing the temple 81 of the wearer's glasses 80 to be inserted through this opening.

[0093] A part of the upper edging cloth 41 in the overlapping portion V, which is located slightly on the forward side of a rear edge of the patch 70, is curved and notched to be recessed toward the front. This notched part serves as an insertion portion 7t. The patch 70 covers the notched portion 7t. Therefore, it is possible to insert the temple 81 of the glasses 80 from the front edge 70f of the patch 70 through the notched portion 7t of the upper edging cloth 41 (see Fig. 21).

[0094] Fig. 21 is a plan view showing a state where the temple 81 of the glasses is inserted through the notched portion 7t, when viewed from the inside of the work hood 300. Similarly to the notched portion 6t1 in Fig. 15, the front edge 70f of the patch 70 is opened toward the front, and the temple 81 of the wearer's glasses 80 can be inserted from this opening through the notched portion 7t.

[0095] It should be understood that the present invention is not limited to the above embodiments, and covers various modifications and equivalents that fall within the spirit and scope of the invention.

[0096] For example, it suffices that the plane of a patch (or a lower edging cloth) and the plane of an upper edging cloth are at least partially not joined to each other, and a front edge of the patch (or the lower edging cloth) and the other long side of the upper edging cloth are at least partially not joined to each other.

[0097] Further, examples of an insertion portion include a slit extending vertically on a cloth, a hole formed on a cloth, and others formed by notching a part of an inside cloth of an overlapping portion. The dimension of these insertion portions in the vertical direction is smaller than the dimension of the overlapping portion in the vertical direction. Therefore, a temple of glasses does not move vertically from the insertion portion, and is held within the insertion portion, thereby preventing the glasses from slipping off. Furthermore, the insertion portion is positioned inside of the area of the overlapping portion, and therefore an outside cloth of the overlapping portion covers the insertion portion, thereby preventing the insertion portion from being exposed to the outside.

Description of Reference Numerals and Symbols

[0098]

2	opening
2a	upper peripheral edge
2b	lower peripheral edge
4, 40, 41	upper edging cloth
4e, 40e, 41e	both ends of upper edging cloth
4f	other long side of upper edging cloth
4i	one long side of upper edging cloth
6, 60	lower edging cloth
6e	both ends of lower edging cloth
6f	other long side of lower edging cloth
6i	one long side of lower edging cloth

6s, 6t1, 6t2, 7t	insertion portion
10	work hood body
11, 12	top holding cloth
13, 14	side-of-head holding cloth
18	neck cloth
19	adjustment belt
20	cover (woven cloth)
70	patch
70f	front edge of patch
80	wearer's glasses
81	temple of glasses
100, 110, 200, 300	work hood
V	overlapping portion

Claims

1. A work hood comprising:

a work hood body that covers a wearer's head and includes an opening from which at least a part of a face of the wearer is exposed; and
a band-shaped stretch upper edging cloth that is attached, on its own one long side, to an upper peripheral edge including an upper portion of the opening of the work hood body, wherein
a patch is joined so as to overlap on an inside or outside of each of both ends of the upper edging cloth,
in an overlapping portion where the patch and the upper edging cloth overlap each other, a plane of the patch and a plane of the upper edging cloth are at least partially not joined to each other, and a front edge of the patch and the upper edging cloth are at least partially not joined to each other, and
in an area of a part of the overlapping portion on one of the patch and the upper edging cloth, which is located inside of the other, and at a position on a rear side of the front edge of the patch, an insertion portion is provided through which a temple of glasses of the wearer is inserted after passing through the front edge of the patch in the overlapping portion.

2. The work hood according to claim 1, wherein the patch is joined so as to overlap on the inside of each of the ends of the upper edging cloth, and in an overlapping portion where the patch and the upper edging cloth overlap each other, the front edge of the patch is not exposed to the outside of the upper edging cloth.

3. A work hood comprising:

a work hood body that covers a wearer's head and includes an opening from which at least a part of a face of the wearer is exposed; and
a band-shaped stretch upper edging cloth that is attached, on its own one long side, to an upper peripheral edge including an upper portion of the opening of the work hood body, wherein
the work hood further comprises a band-shaped stretch lower edging cloth that is attached, on its own one long side, to an area of the opening of the work hood body, which is located on a lower side of the upper peripheral edge,
both ends of the lower edging cloth are respectively joined to both side portions of the opening,
both ends of the upper edging cloth overlap respectively on the ends of the lower edging cloth, and in an overlapping portion where the upper edging cloth and the lower edging cloth overlap each other, the other long side of the lower edging cloth is not exposed to an outside of the upper edging cloth,
in the overlapping portion, a plane of the lower edging cloth and a plane of the upper edging cloth are at least partially not joined to each other, and the other long side of the lower edging cloth and the other long side of the upper edging cloth are at least partially not joined to each other, and
on a rear side of the other long side on each of the ends of the lower edging cloth, and in a part of the overlapping portion, an insertion portion is provided through which a temple of glasses of the wearer is inserted after passing through the other long side of the lower edging cloth in the overlapping portion.

4. The work hood according to any one of claims 1 to 3, wherein the work hood body includes
a substantially-cylindrical neck cloth that covers at least a neck of the wearer, and that constitutes at least a part of the lower peripheral edge of the opening, and

two top holding cloths that constitute at least a part of the upper peripheral edge of the opening, pass through a top, and are joined to the neck cloth at the neck or a back of the head, and that are divided along a center line in a vertical direction.

5. The work hood according to any one of claims 1 to 4, wherein the neck cloth is formed up to a height of an intersection of the upper peripheral edge and the lower peripheral edge.

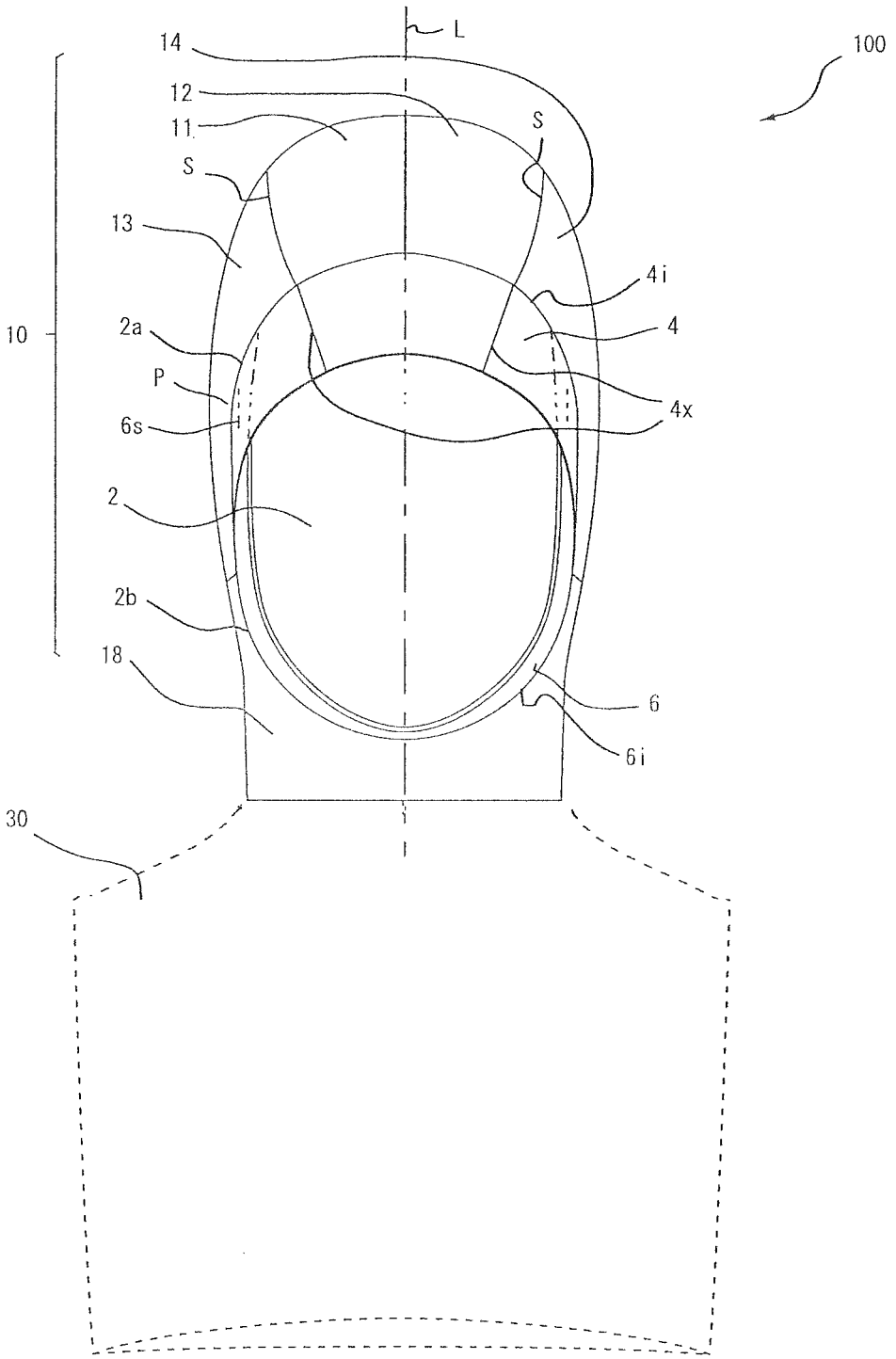
6. The work hood according to any one of claims 1 to 5, further comprising two side-of-head holding cloths that are positioned between the neck cloth and the top holding cloths, and are joined thereto, and that constitute a part of the upper peripheral edge of the opening and a part of the lower peripheral edge of the opening, and cover a side of the wearer's head laterally.

7. The work hood according to any one of claims 1 to 6, wherein the neck cloth, the top holding cloths, and the side-of-head holding cloths are sewed to each other by double-sided decorative stitches.

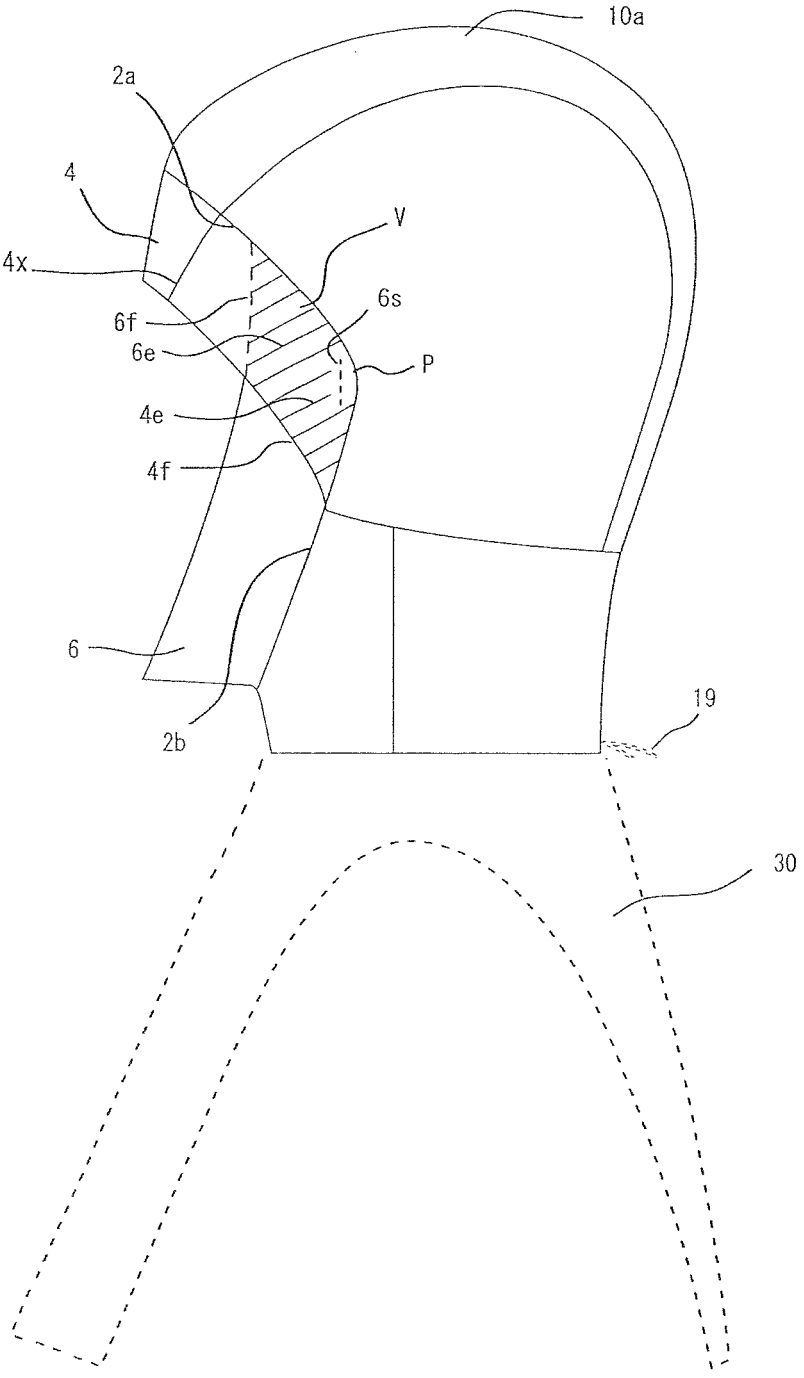
8. The work hood according to any one of claims 1 to 7, wherein an adjustment belt is provided on the neck cloth along a circumferential direction.

9. The work hood according to any one of claims 4 to 8, wherein the top holding cloths and the side-of-head holding cloths are made from a mesh material, and the work hood further comprises a cover that detachably covers the top holding cloths and the side-of-head holding cloths.

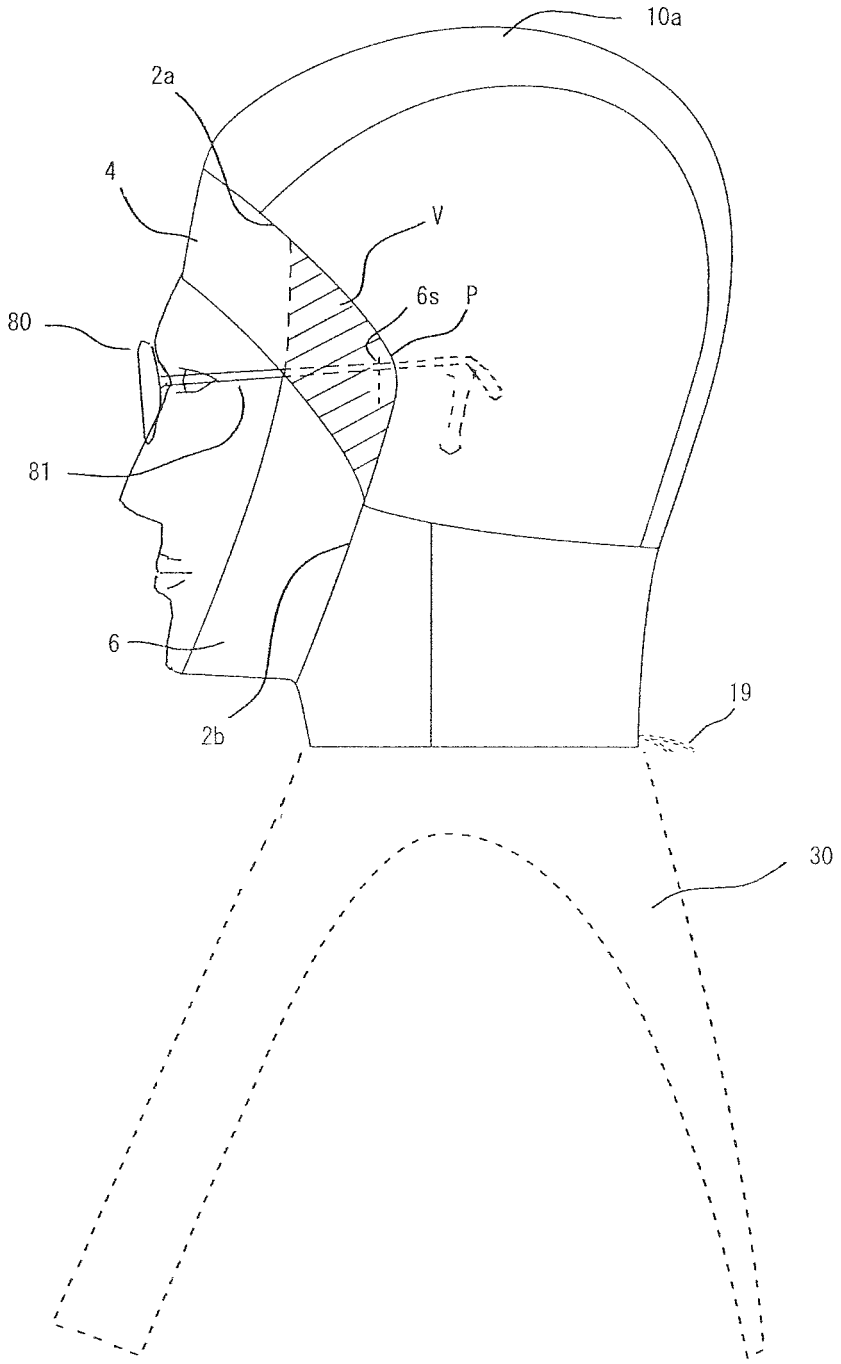
[Fig.1]



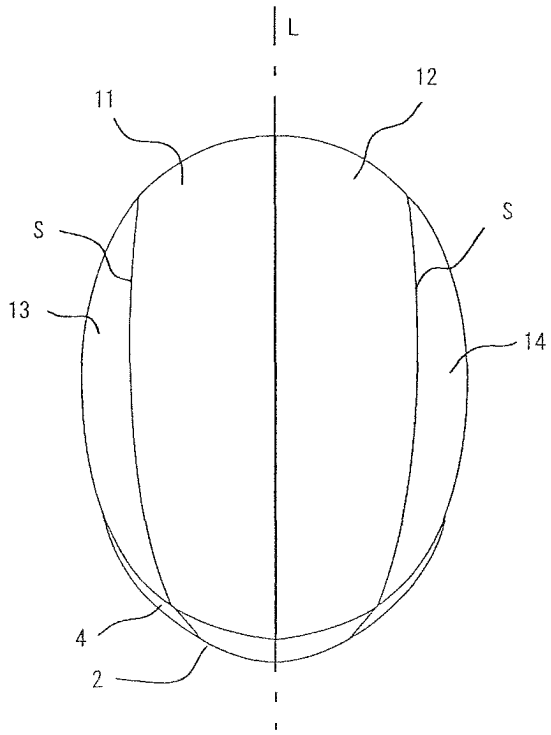
[Fig.2]



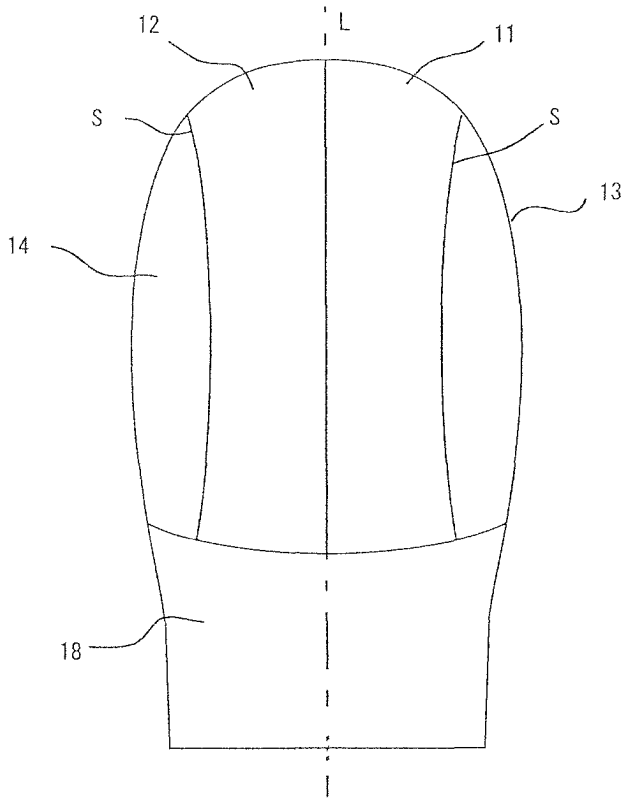
[Fig.3]



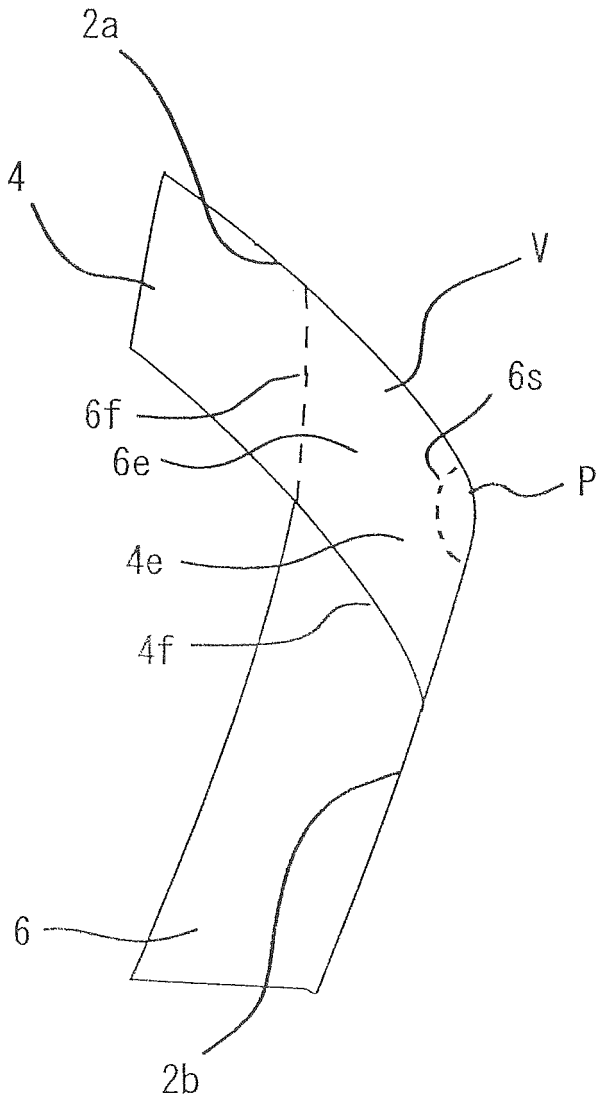
[Fig.4]



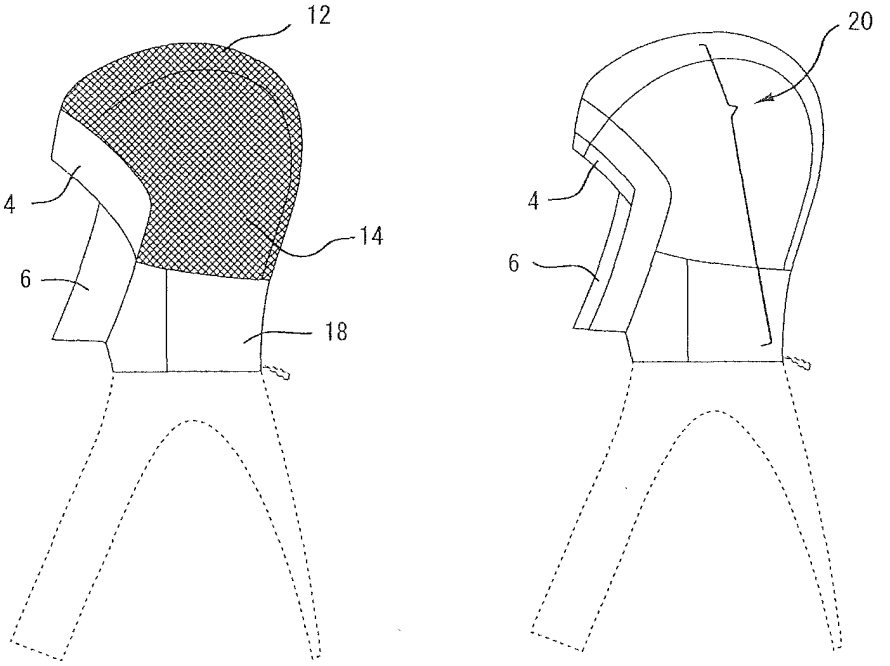
[Fig.5]



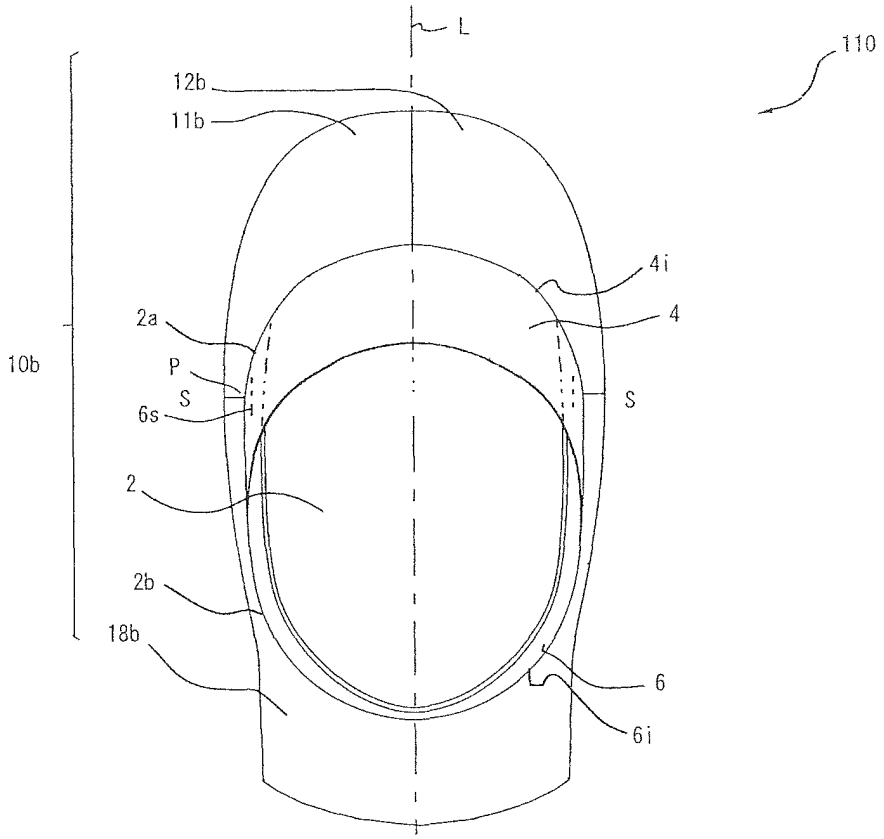
[Fig.6]



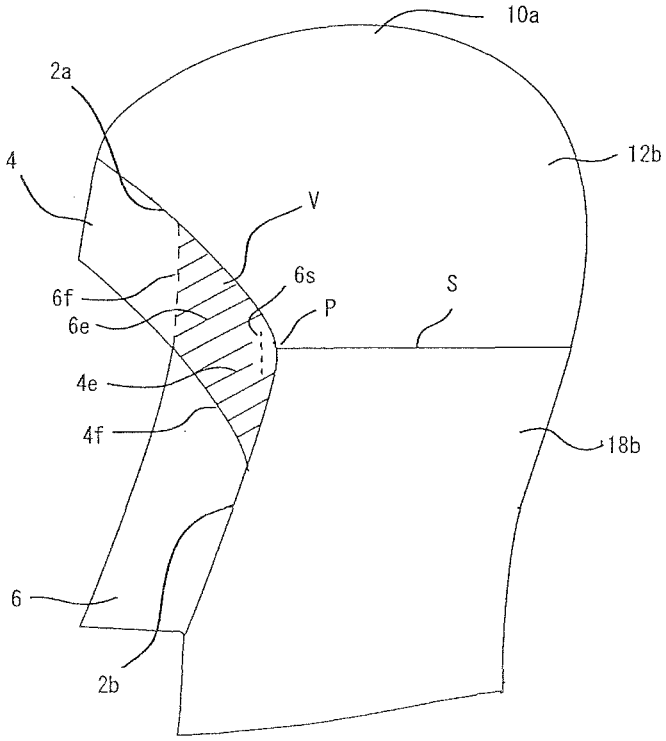
[Fig.7]



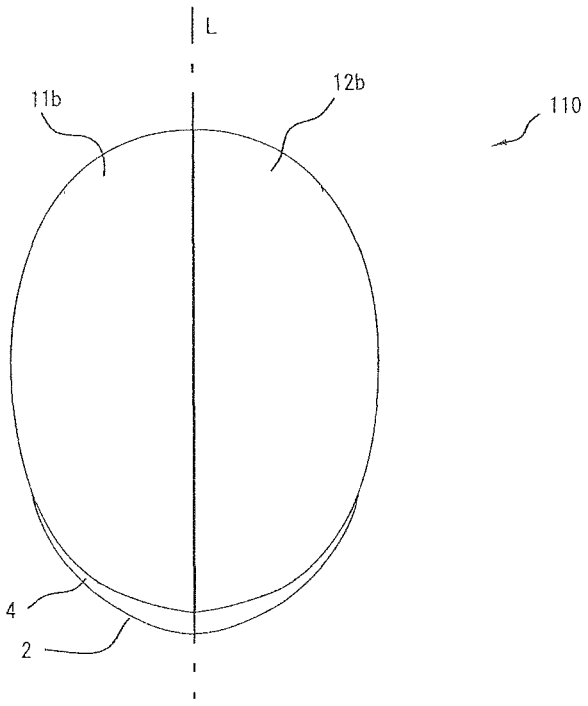
[Fig.8]



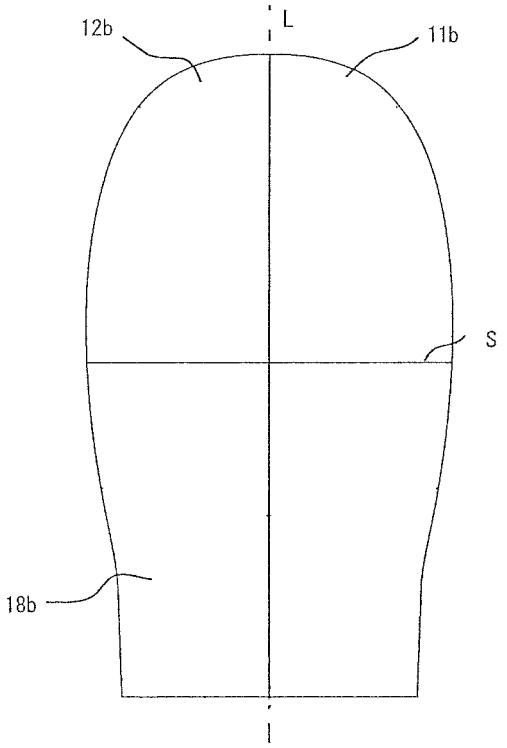
[Fig.9]



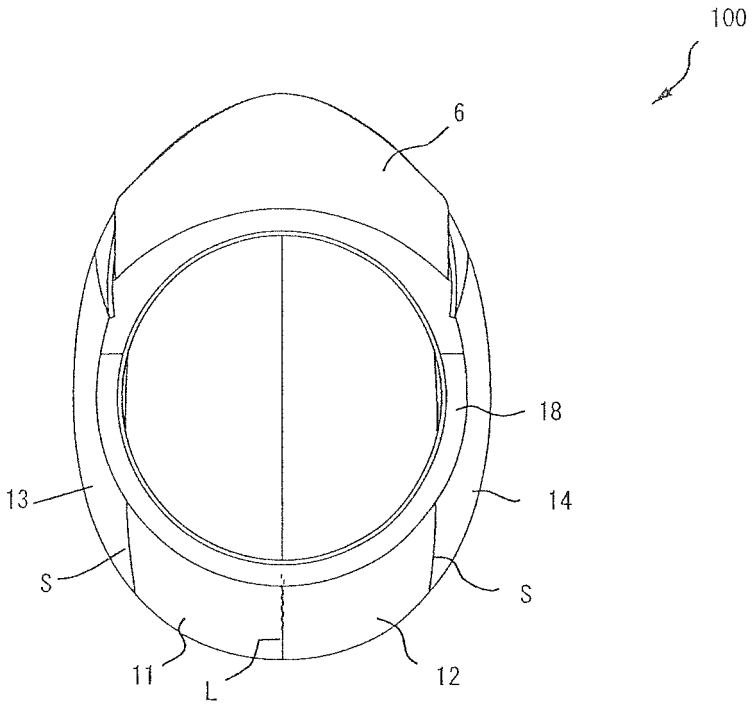
[Fig.10]



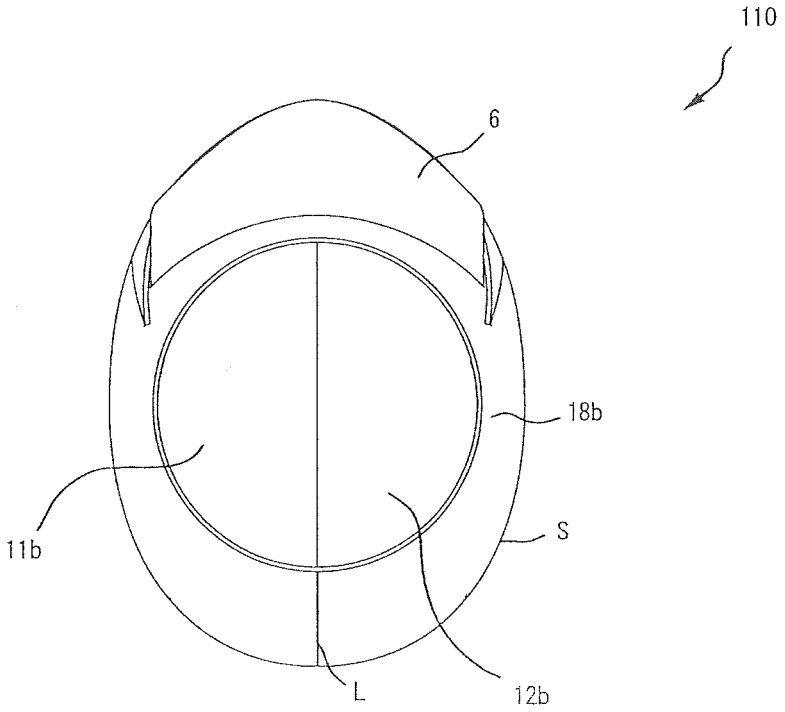
[Fig.11]



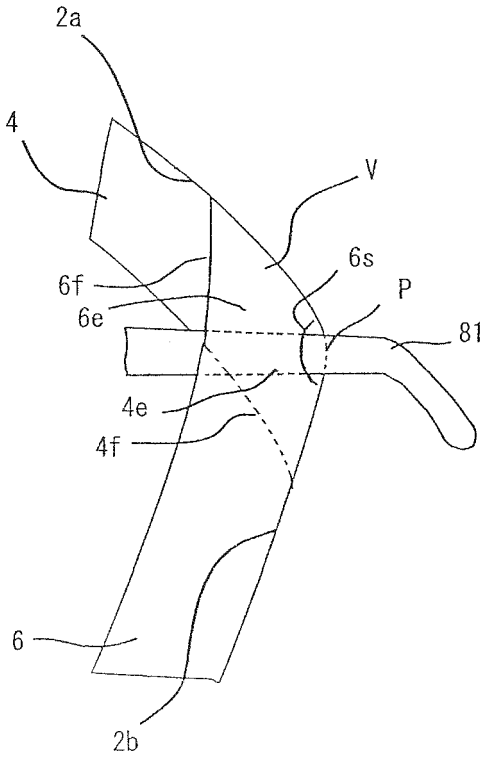
[Fig.12]



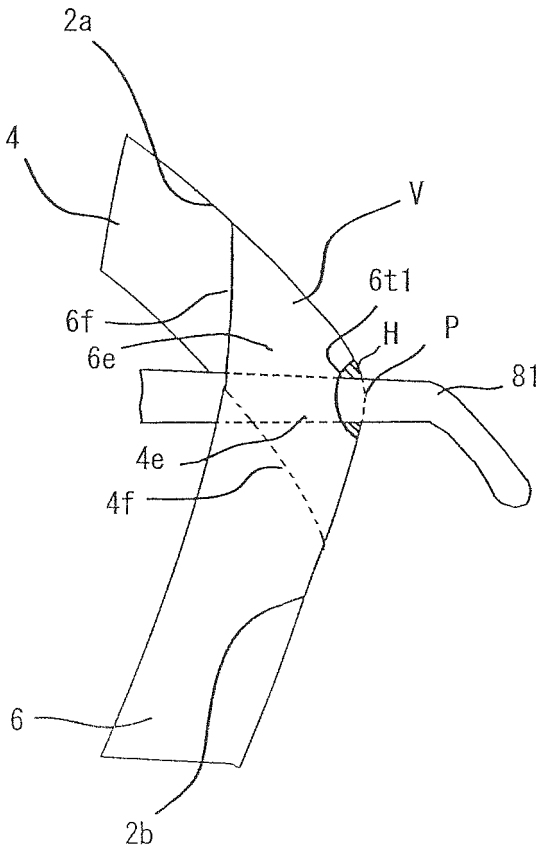
[Fig.13]



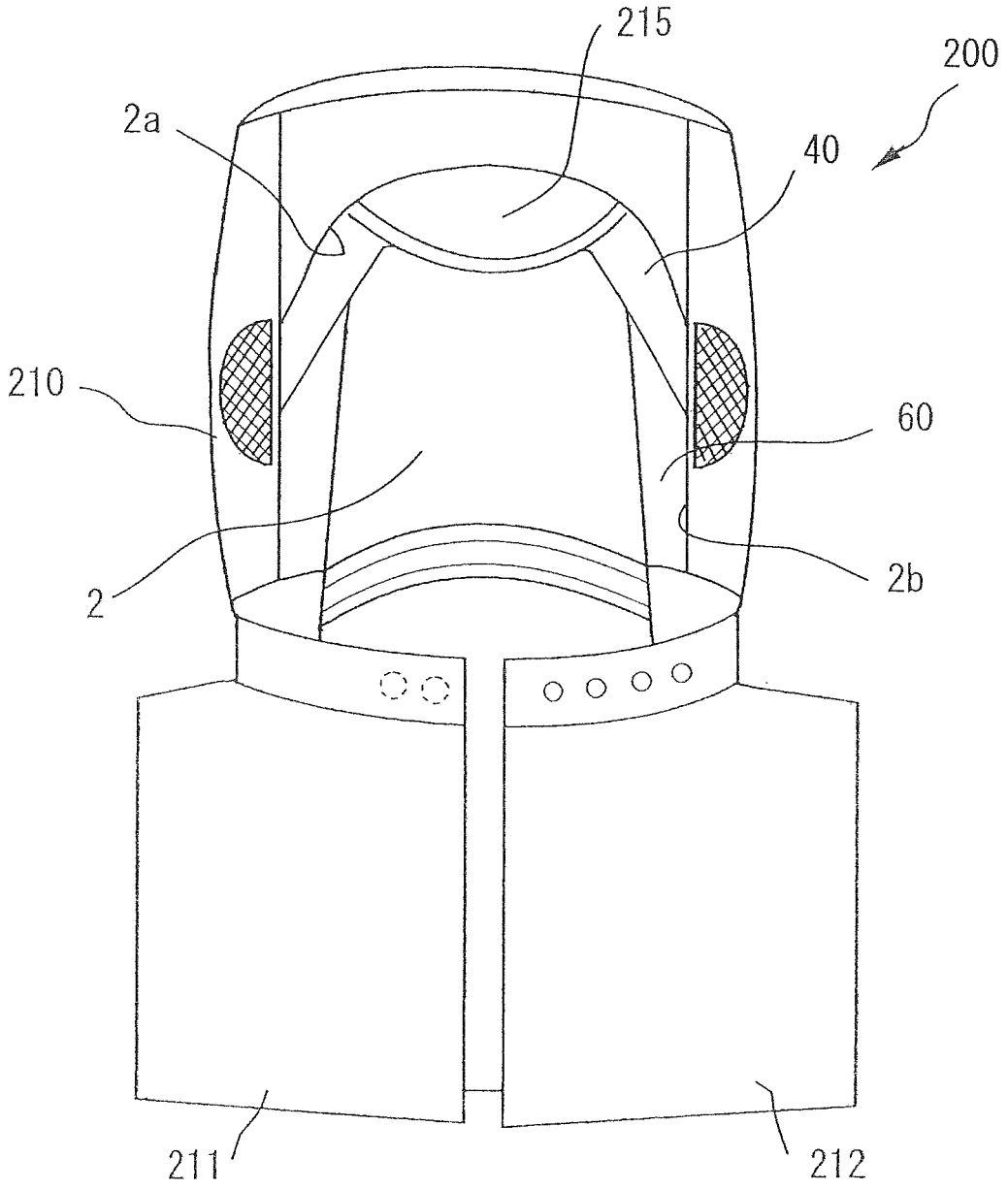
[Fig.14]



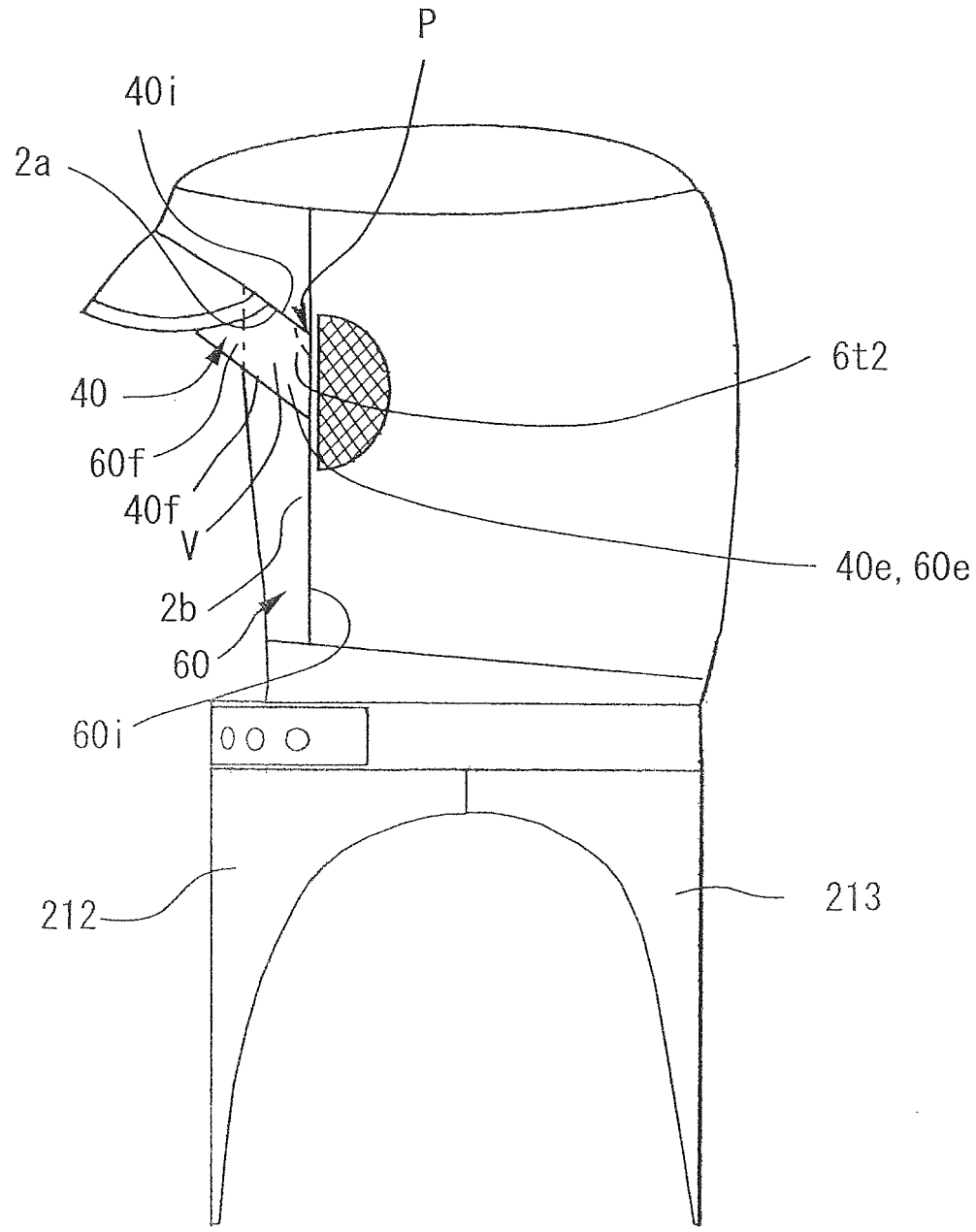
[Fig.15]



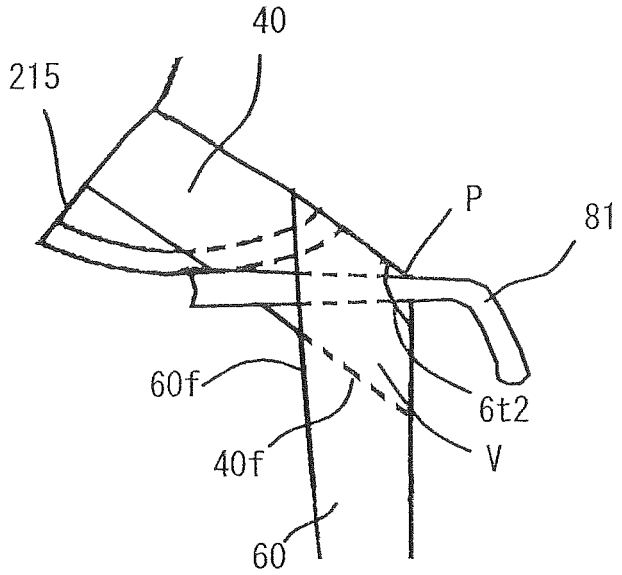
[Fig.16]



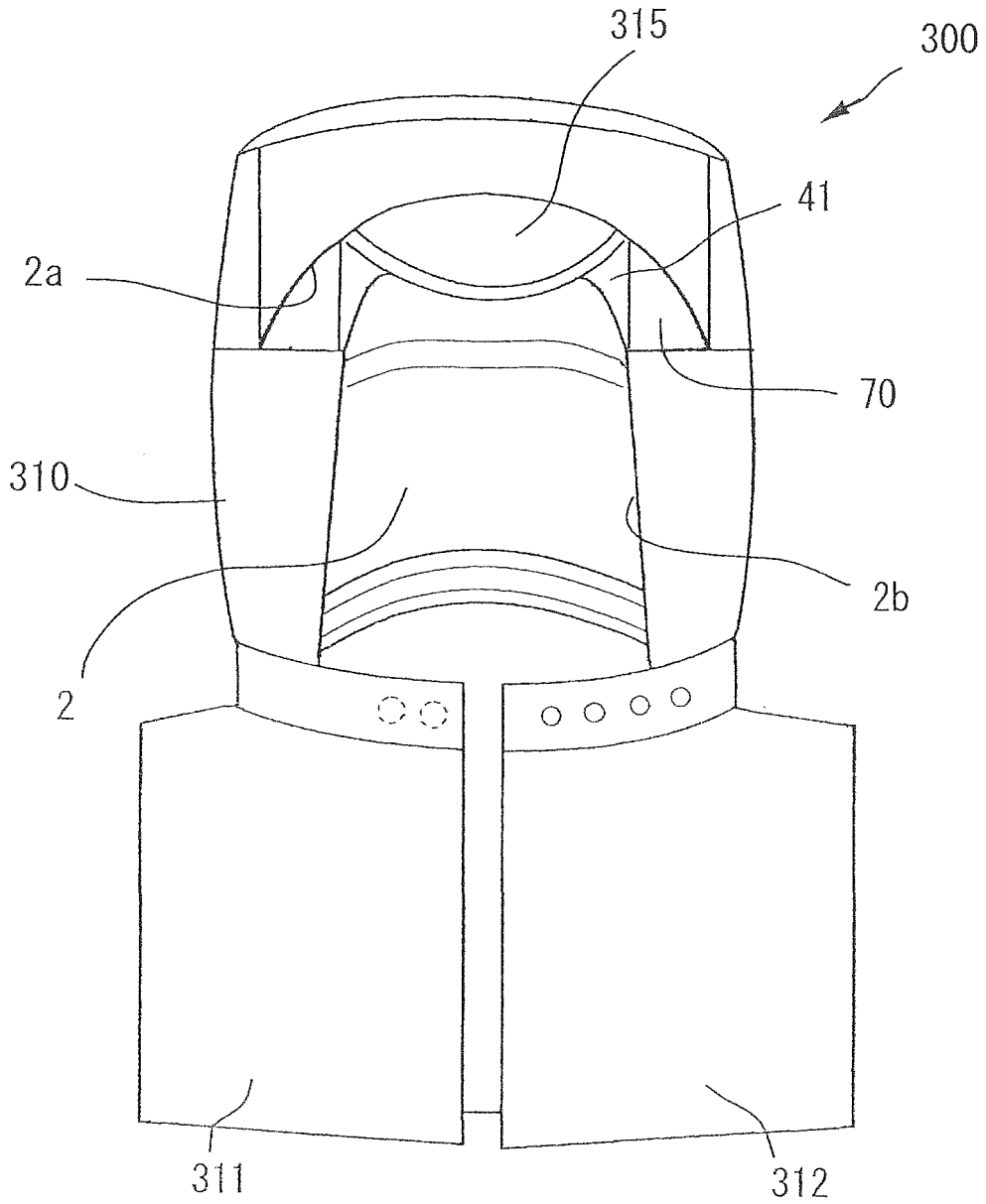
[Fig.17]



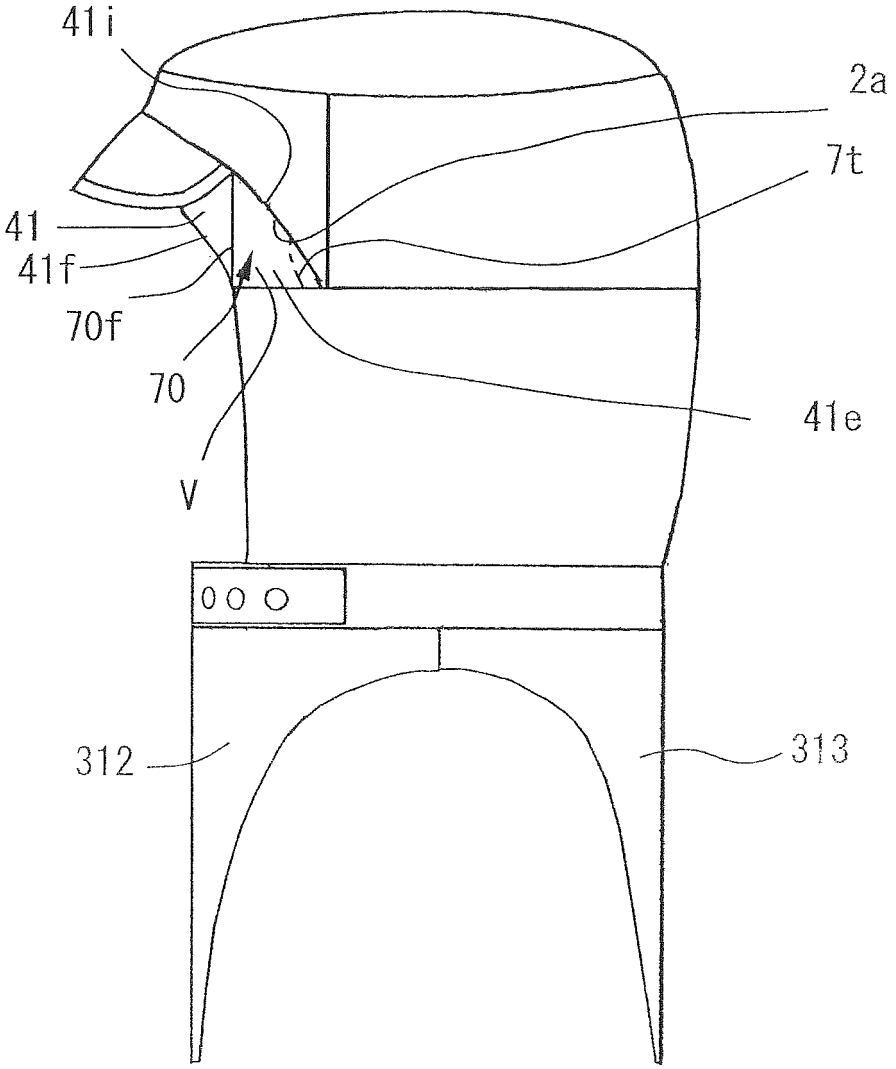
[Fig.18]



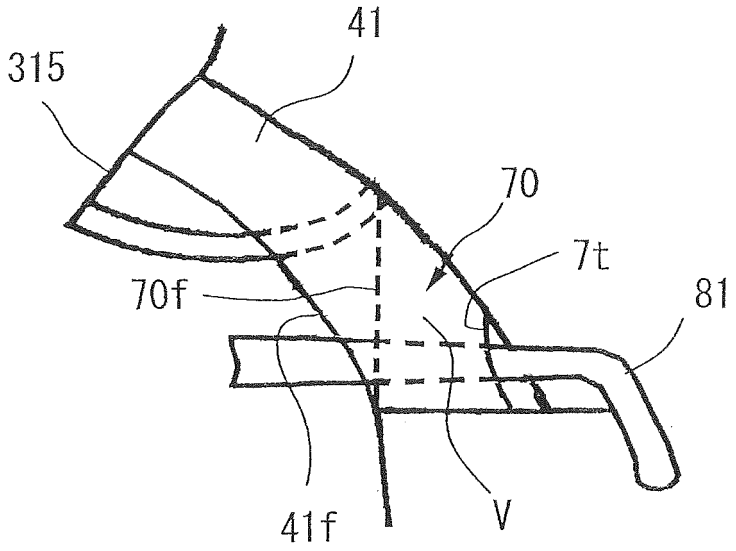
[Fig.19]



[Fig.20]



[Fig.21]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2011/060934

A. CLASSIFICATION OF SUBJECT MATTER
A42B1/04(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A42B1/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2011
Kokai Jitsuyo Shinan Koho 1971-2011 Toroku Jitsuyo Shinan Koho 1994-2011

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 8-158134 A (Sunroad Co., Ltd.), 18 June 1996 (18.06.1996), paragraphs [0009], [0012]; fig. 4 & CN 1132612 A	1,4-8 2-3,9
Y	JP 2005-171441 A (Sunroad Co., Ltd.), 30 June 2005 (30.06.2005), claims; paragraphs [0009], [0015] to [0018]; fig. 1 to 2 (Family: none)	1,4-8
Y	JP 2006-22434 A (HARADA CORP.), 26 January 2006 (26.01.2006), paragraphs [0001], [0013] to [0019]; fig. 1 to 7 & CN 1718125 A	1,4-8

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
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"P" document published prior to the international filing date but later than the priority date claimed
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
02 August, 2011 (02.08.11)	16 August, 2011 (16.08.11)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2011/060934

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2006-37275 A (Yugen Kaisha Emuzu Corporation et al.), 09 February 2006 (09.02.2006), paragraphs [0008], [0016], [0023]; fig. 3 (Family: none)	4-8
Y	JP 9-195118 A (Honshu Iryo Kabushiki Kaisha), 29 July 1997 (29.07.1997), paragraphs [0011], [0014], [0018]; fig. 1 to 5 (Family: none)	6-8
Y	JP 6-7467 A (Kabushiki Kaisha Beru), 18 January 1994 (18.01.1994), paragraphs [0006], [0010] to [0025]; fig. 1, 6 (Family: none)	6-8
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