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(54) **MASK WITH DETACHABLE EARRINGS**

(57) The present invention relates to a mask with detachable earrings that are manufactured to be detachable from a mask body and reused in a new mask body. To this end, a mask includes a mask body that covers wearers' mouth and nose, and earrings respectively provided on left and right sides of the mask body, wherein the mask body comprises a cutting line or an unevenness portion capable of selectively attaching and detaching the earrings to and from the mask body. According to the present invention, it is possible to freely attach and detach earrings to and from a mask body even without using a separate connection tool, and it is unnecessary to install the earrings to the mask body, and thus the production amount of the mask may increase by 3 to 10 times, and the manufacturing cost of the mask may be reduced.

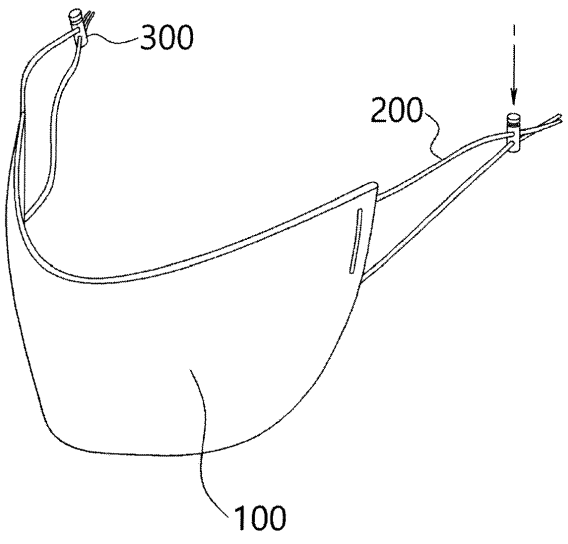

Fig. 1

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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a mask capable of continuously filtering air inhaled through wearer's nose and mouth while stably covering the nose and mouth, and more particularly, to a mask with detachable earrings that are manufactured to be detachable from a mask body and reused in a new mask body.

Background of the Related Art

[0002] In general, a mask refers to an article that covers the wearer's nose and mouth to prevent inhalation and scattering of germs and dust for hygiene. These masks have been used since the outbreak of influenza, a Spanish cold that was prevalent in 1919, and were developed to prevent a phenomenon in which a person's inhalation of cold air decreases the resistance of the nasal cavity or oral cavity and increases the likelihood of becoming infected with influenza. In case of a first developed mask, it was able to prevent cold air from entering the person's nasal cavity or oral cavity, but it could not filter out viruses or bacteria contained in the air and thus failed to prevent influenza.

[0003] Since then, various technologies have been developed to develop a filter having an antibacterial function to filter out viruses or bacteria contained in the air, and through this, influenza has been prevented. However, as the industry developed, there was a problem that the environment such as air, water quality, soil, etc. was polluted, and the atmosphere was contaminated with substances having a particle diameter of 10 nm or less, such as sulfur dioxide gas, nitrogen oxide, lead, ozone, carbon monoxide, and fine dust.

[0004] As described above, since it is difficult to artificially remove pollutants such as fine dust already contained in the air, a technology for filtering pollutants contained in the air has also been developed. In particular, when a person does outside activities, since contaminants such as fine dust are directly inhaled, a mask that may filter contaminants with a filter while covering the person's nose and mouth has been developed.

[0005] A typical mask includes a mask body portion that is seated on the face of a wearer such that the inner surface covers the wearer's nose and mouth, and air is introduced from the outside, and earrings that are coupled to both left and right sides of the mask body portion and hang on the wearer's ears. That is, the earrings hang on the wearer's ears to provide a function of preventing the mask body portion from being separated from the wearer's face. However, depending on the size of the wearer's face, since the length of the earrings is short, and the mask body portion presses the wearer's face, which makes it uncomfortable to wear, or since the length of the earrings is long, the mask body portion flows down from the wearer's face and is not in close contact with the wearer's face, which causes a phenomenon in which external air directly flows into the wearer's nose and mouth.

[0006] Recently, with coronavirus infection-19 (COVID-19) outbreaks around the world, more than millions of masks are used a day and then discarded.

[0007] In particular, manufacturing of an electrostatic filter constituting the mask uses a melt blown method in which a compressed polypropylene (PP) solution is sprayed with a high-temperature, high-pressure nozzle applied with a high voltage (+) to produce a non-woven fabric in the form of a random mesh of nano-thickness.

[0008] As such, the mask body is mainly made of PP, but since the earrings are made of a material different from the mask body and cannot be recycled, the discarded mask must be disposed of through incineration, and thus a huge amount of fine dust is mass produced.

[0009] In addition, the most defects occur in the earrings when manufacturing the mask, and a lot of manufacturing time to attach the earrings to the mask body is required during the total manufacturing time of the mask, thus there is a need to develop a mask that may reuse the earrings in order to increase the mask production speed and reduce the defect rate of the mask.

SUMMARY OF THE INVENTION

[0010] Accordingly, the present invention has been made in view of the above-mentioned problems occurring in the prior art, and it is an object of the present invention to provide a mask that implements a structure in which earrings are easily detachable from a mask body, thereby reusing the existing earrings in a new mask body even if the used mask body is discarded.

[0011] To accomplish the above-mentioned object, according to a first aspect of the present invention, there is provided a mask including: a mask body that covers wearers' mouth and nose, and earrings respectively provided on left and right sides of the mask body, wherein the mask body includes a cutting line or an unevenness portion capable of selectively attaching and detaching the earrings to and from the mask body.

[0012] According to the present invention, it is possible to freely attach and detach earrings to and from a mask body even without using a separate connection tool, and it is unnecessary to install the earrings to the mask body, and thus the production amount of the mask may increase by 3 to 10 times, and the manufacturing cost of the mask may be reduced.

[0013] In addition, in the present invention, since the earrings and the mask body having different materials may be separated and collected, it is unnecessary to incinerate both the discarded earrings and mask body, and thus the environmental pollution may be prevented.

[0014] In addition, in the present invention, since it is unnecessary to use a length adjusting tool for the ear-

rings, the wearer does not feel irritation, and since the weight of the mask is minimized, it is possible to wear the mask for a long time.

[0015] In addition, according to the present invention, since the earrings assembled in the mask body may minimize a separation phenomenon of the mask body for the face, the leakage rate of the mask may be reduced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The above and other objects, features and advantages of the present invention will be apparent from the following detailed description of the preferred embodiments of the invention in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view showing a first embodiment of a mask according to the present invention;
FIG. 2 is a perspective view showing a second embodiment of a mask according to the present invention;
FIG. 3 is a perspective view showing a third embodiment of a mask according to the present invention;
FIG. 4 is a rear view showing the third embodiment of a mask according to the present invention;
FIG. 5 is an exploded front view showing a fourth embodiment of a mask according to the present invention;
FIG. 6 is a front view showing earrings coupled to a mask body of FIG. 5;
FIG. 7 is an exploded front view showing a fifth embodiment of a mask according to the present invention;
FIG. 8 is an exploded front view showing a sixth embodiment of a mask according to the present invention;
FIG. 9 is an exploded front view showing a seventh embodiment of a mask according to the present invention; and
FIG. 10 is a perspective view showing a seventh embodiment of the mask according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] Hereinafter, a mask with detachable earrings (hereinafter abbreviated as the 'mask') according to embodiments of the present invention will be described in detail with reference to the accompanying drawings.

[0018] FIG. 1 is a perspective view showing a first embodiment of a mask according to the present invention, FIG. 2 is a perspective view showing a second embodiment of a mask according to the present invention, FIG. 3 is a perspective view showing a third embodiment of a mask according to the present invention, and FIG. 4 is a rear view showing the third embodiment of a mask according to the present invention.

[0019] Referring to FIGS. 1 to 4, the mask according to the present invention includes a mask body 100 covering wearer's mouth and nose, and earrings 200 provided on the left and right sides of the mask body 100, respectively, and selectively may further include an earrings connection rod 300 connecting both ends of the earrings 200. In this case, the mask body 100 includes a cutting line or an unevenness portion capable of selectively attaching and detaching the earrings 200 to and from the mask body 100.

[0020] In addition, the earrings may be formed in an open curve structure as shown in FIGS. 1 and 2, or may be formed in a closed curve structure as shown in FIGS. 3 and 4.

[0021] Hereinafter, each component will be described in more detail with reference to the drawings.

[0022] Referring to FIGS. 1 to 4, the mask according to the present invention includes the mask body 100.

[0023] The mask body 100 is seated on the wearer's face so as to cover the wearer's nose and mouth, and filters harmful substances such as fine dust contained in the air introduced from the outside direction to introduce only clean air into the interior.

[0024] To this end, the mask body 100 may be configured such that two or more of cotton, synthetic resin, nonwoven fabric filter, synthetic resin filter, and electrostatic filter are stacked individually or in combination. For example, the mask body 100 may be configured as two or three non-woven filters, may be configured as two nonwoven filters and one electrostatic filter, and may be configured as one non-woven filter and one electrostatic filter.

[0025] Here, the electrostatic filter means a filter that is electrostatically treated using an ultra-high voltage current, and static electricity may capture fine dust that has a polarity with positive or negative charges, thereby enhancing a dustproof effect.

[0026] As a specific aspect, the mask body 100 according to the present invention includes an outer filter and an inner filter in order to increase the blocking rate of filtering harmful substances such as fine dust while allowing air to flow smoothly, and may be configured to selectively further include a central filter between the outer filter and the inner filter.

[0027] The outer filter introduces air introduced from the outer direction in an inner direction, and has a waterproof function such that moisture does not permeate. In this case, the outer filter may be formed of any fiber having the waterproof function, and may use, for example, a synthetic fiber or a nonwoven filter. In addition, the outer filter is preferably three-dimensionally formed to form an air layer through which sufficient air may be introduced between the inner surface of the inner filter and the wearer's face such that breathing of the wearer is comfortable.

[0028] The inner filter is combined with the outer filter so as to be located on the inner surface of the outer filter to cover the wearer's nose and mouth, introduces air flowing through the outer filter in the inner direction, and has

a waterproof function such that moisture does not permeate. At this time, the inner filter may be formed of any fiber having the waterproof function, and may use, for example, a synthetic fiber or a nonwoven filter.

[0029] In addition, the inner filter may be manufactured by dividing into upper and lower portions to form a space between the wearer's nose and mouth such that the breathing of the wearer is comfortable. That is, the inner filter may be manufactured by dividing into the upper and lower portions and then combining the upper and lower portions such that the lower portion forms a predetermined angle with respect to the upper portion, and the inner filter may be formed to be round or bent rather than horizontally formed on the side cross-section.

[0030] Accordingly, the inner filter forms a space between the wearer's nose and mouth and the mask body 100, and an air layer is formed in the space, and thus the wearer's breathing becomes easier.

[0031] If necessary, a nose piece 160 that is deformed to correspond to the shape of the wearer's nose may be provided between the outer filter and the inner filter. The nose piece 160 is deformed to correspond to the shape of the wearer's face such that the inner surface of the inner filter and the wearer's face are in close contact with each other, and then maintains the shape thereof, and may be configured as a wire.

[0032] That is, the wearer applies pressure to the nose piece after the mask body 100 is in close contact with the face, and the nose piece is deformed to correspond to the shape of the wearer's nose. As a result, the upper portion of the inner filter and the wearer's nose are in close contact and introduction of unfiltered air is blocked completely.

[0033] If necessary, the nose piece 160 may be made of the same material as the mask body 100 such that the nose piece 160 may be recycled together with the mask body 100.

[0034] The central filter is provided between the outer filter and the inner filter in order to improve the filtering ability of the mask body 100, and may be configured as a melt blown filter (MB filter) or an electrostatic filter. If necessary, the central filter may be configured to have a double structure in which the melt blown filter and the electrostatic filter are stacked.

[0035] As described above, when the waterproof function is provided to the inner filter, since moisture contained in the breath is not transferred to the central filter, it is possible to prevent the performance of the electrostatic filter from deteriorating due to moisture.

[0036] As an embodiment, the mask body 100 according to the present invention may include a mouth contact sheet 102 that covers the wearer's mouth and nose, a nose contact sheet 104 that is bonded to the upper portion of the mouth contact sheet 102 to cover the wearer's nose, and a chin contact sheet 106 that is bonded to the lower portion of the mouth contact sheet 102 to cover the wearer's chin as shown in FIG. 4.

[0037] Each of the mouth contact sheet 102, the nose contact sheet 104, and the chin contact sheet 106 may be configured as the outer filter and the inner filter, or may be configured as the outer filter, the central filter, and the inner filter as described above.

[0038] If necessary, a nose hanging portion 105 that is curved and sunken to be in contact with the wearer's nose may be formed on the nose contact sheet 104, and a chin hanging portion (not shown) that is curved and sunken to be in contact with the wearer's chin may be formed on the chin contact sheet 106.

[0039] An upper bonding line 143 may be formed on the mask body 100 between the mouth contact sheet 102 and the nose contact sheet 104, and between the mouth contact sheet 102 and the chin contact sheet 106 through heat fusion or ultrasonic fusion, and the nose contact sheet 104 and the chin contact sheet 106 are spread from the mouth contact sheet 102 along the upper bonding line 143 such that the contact area covering the face may be expanded.

[0040] The bonding line 140 may be formed in a solid line, a broken line, or a predetermined pattern, and may include a first edge bonding line 141 formed between the nose bonding sheet 104 along the edge of the mouth contact sheet 102 and a second edge bonding line 142 formed between the chin contact sheet 106 along the edge of the mouth contact sheet 102.

[0041] In addition, the bonding line 140 may further include the upper bonding line 143 formed to be spaced apart from the first edge bonding line 141 on the lower portion of the first edge bonding line 141 such that air does not pass upon the wearer's breathing and the bonding surface 150 of the mouth contact sheet 102 and the nose contact sheet 104 expands and the lower bonding line 144 formed to be spaced apart from the second edge bonding line 142 on the upper portion of the second edge bonding line 142 such that air does not pass upon the wearer's breathing and the bonding surface 150 of the mouth contact sheet 102 and the chin contact sheet 106 expands.

[0042] The nose contact sheet 104 is in close contact with the rear surface of the mouth contact sheet 102 and then spreads along the upper bonding line 143 when the wearer uses the mask to closely adhere to the nose and wearer's face.

[0043] The chin contact sheet 106 is in close contact with the rear surface of the mouth contact sheet 102 and then spreads along the upper bonding line 143 when the wearer uses the mask to closely adhere to the wearer's chin and face.

[0044] In this way, the mask body 100 according to the present invention may be formed in a structure of a stereoscopic 3D mask including the mouth contact sheet 102, the nose contact sheet 104, and the chin contact sheet 106.

[0045] As another embodiment, the mask body 100 according to the present invention may be formed in a structure of a planar 2D mask.

[0046] When the earrings 210 and 220 are formed in

the closed curve structure as shown in FIGS. 3 and 4, the unevenness portion 130 forms a hooking space in the inner direction of the mask body 100 on the edges of the left and right ends to be wound around the left and right ends of the mask body 100. In other words, the unevenness portion 130 provides a space in which the earrings 210 and 220 pulled in the direction of the wearer's ears may be wound by a selection of the user.

[0047] More specifically, the unevenness portion 130 may include a concave portion 132, a convex portion 134, and all of them. For example, the concave portion 132 forms a concave structure sunken in the edges of the left and right ends of the mask body 100, and the convex portion 134 forms a convex structure protruding from the edges of the left and right ends of the mask body 10 as shown in FIG. 2.

[0048] In addition, a cutting line is preferably provided on the bonding surface 150 of the mask body 100 so as not to engage in an air movement during the wearer's breathing

[0049] More specifically, the cutting line may be provided on the bonding surface 150 between the mouth contact sheet 102, the nose contact sheet 104, and the chin contact sheet 106, or a bonding surface between the outer filter and the inner filter.

[0050] In other words, the cutting line may be provided on any one or more of a bonding surface between the mouth contact sheet 102 and the nose contact sheet 104, a bonding surface between the mouth contact sheet 102 and the chin contact sheet 106, and a bonding surface between the mouth contact sheet 102, the contact sheet 104 and the chin contact sheet 106. In addition, the cutting line may be provided on a bonding surface between the outer filter and the inner filter when the mask body 100 is formed in a planar 2D mask structure.

[0051] FIG. 5 is an exploded front view showing a fourth embodiment of a mask according to the present invention, and FIG. 6 is a front view showing earrings coupled to a mask body of FIG. 5.

[0052] As a first embodiment, the cutting line according to the present invention includes a hooking cutting line 110 in the shape of a hooking body and a hooking body cutting line 115 provided inside the mask body 100 such that the earrings 210 and 220 may be wound around the left and right ends of the mask body 100 as shown in FIG. 5. At this time, the hooking cutting line 110 and the hooking body cutting line 115 are provided on the bonding surface 150 of the mask body 100.

[0053] More specifically, the hooking cutting line 110 provides the hooking body on which the earrings 210 and 220 may be temporarily wound by the external force of the user to the surface of the mask body 100 such that the earrings 210 and 220 may be fixed to the mask body 100 even in the state where the earrings 210 and 220 do not penetrate the inside of the mask body 100.

[0054] To this end, the hooking cutting line 110 is formed to have an open curve structure such that the hooking body is not separated from the mask body 100. In other words, the hooking cutting line 110 is omitted in a part where the hooking body is connected to the mask body 100.

[0055] The hooking cutting line 110 is a line that cuts the outer shape of the hooking body from the mask body 100 such that the hooking body on which the earrings 210 and 220 may be wound may protrude from the mask body 100 by the external force supplied from the user.

[0056] The hooking cutting line 110 may have any shape as long as it may provide an outer shape in which the earrings 210 and 220 may be wound. Specifically, the hooking cutting line 110 may be formed to have a structure such as an arrow shape, a triangle, a square, a circle, etc.

[0057] The hooking cutting line 110 is formed to face the adjacent earrings 210 and 220 such that the hooking body is fitted to the hooking body cutting line 115 to act as a hooking ring, and the part of the hooking body connected to the mask body 100 is preferably formed to be positioned in the opposite direction of the adjacent earrings 210 and 220 as shown in FIG. 5.

[0058] In addition, at least one hooking cutting line 110 may be provided in the right end of the mask body 100 and at least one hooking cutting line 110 may be provided in the left end of the mask body 100.

[0059] For example, when two hooking cutting lines 110 are respectively provided in the left and right ends of the mask body 100, the first earring 210 is provided on the left end of the mask body 100 and, as shown in FIG. 6, wound around two hooking bodies forming the hooking ring, and the second earring 220 is provided on the right end of the mask body 100 and wound around two hooking bodies forming the hooking ring.

[0060] If necessary, when the cutting line according to the present invention includes the two hooking cutting lines 110 and the two hooking body cutting lines 115 are provided inside the mask body 100 in the vertical direction, an auxiliary cutting line 116 may be provided between the hooking cutting line and the hooking cutting line or between the hooking body cutting line and the hooking body cutting line. The auxiliary cutting line 116 is provided on the bonding surface 150 such that the wearer may manually adjust the length of the earrings.

[0061] More specifically, as shown in FIG. 6, the auxiliary cutting line 116 provides a passage through which one end of the earrings installed to wrap both of a first hooking cutting line provided in the upper end of the mask body 100 and a second hooking cutting line provided in the lower end of the mask body 100 may be inserted in a ring shape such as a 'Q' shape.

[0062] Accordingly, when the wearer pulls one end of the earrings that has penetrated the auxiliary cutting line 116, like the first earring 210 of FIG. 6, the length of the earrings wrapping the ear is reduced, and when one end of the earrings is disposed not to penetrate the auxiliary cutting line 116, like the second earring 220 of FIG. 6, the length of the earrings wrapping the ear increases.

[0063] As a second embodiment, the cutting line ac-

cording to the present invention includes a plurality of earrings cutting lines 120 formed in the left and right ends of the mask body 100 such that both ends of the earrings 210 and 220 as shown in FIGS. 1 and 2 penetrate the inside of the mask body 100 and are fixed to the left and right ends.

[0064] More specifically, the earrings cutting line 120 temporarily provides a space which the earrings 210 and 220 may penetrate by the external force of a user such that the earrings 210 and 220 may be fixed while penetrating the inside of the mask body 100.

[0065] Since an open space is reduced when the supply of the external force from the user is stopped, the earrings cutting line 120 compresses the interpolated earrings 210 and 220 to penetrate the open space and provides pressure such that the earrings 210 and 220 remain coupled to the mask body 100.

[0066] To this end, the earrings cutting line 120 may be formed in a cross shape, a straight line, an arrow shape, a ' ⊥ ' shape, and the like. In this case, the straight shape may be formed in a ' — ' shape or a '] ' shape.

[0067] For example, when four earrings cutting lines 120 are provided in the right end of the mask body 100, the earrings 210 and 220 may be installed on the mask body 100 such that the ends of the earrings 210 and 220 are adjacent to the earrings cutting lines as shown in FIG. 2.

[0068] Specifically, one end of the second earring 220 penetrates each of an arbitrary first earrings cutting line and a second earrings cutting line, and the other end of the second earring 220 penetrates each of a fourth earrings cutting line and a third earrings cutting line. At this time, the plurality of earrings cutting lines provided in the right end of the mask body 100 are disposed in the order of the first earrings cutting line, the second earrings cutting line, the third earrings cutting line, and the fourth earrings cutting line from the top to the bottom.

[0069] FIG. 7 is an exploded front view showing a fifth embodiment of a mask according to the present invention, and FIG. 8 is an exploded front view showing a sixth embodiment of a mask according to the present invention.

[0070] Referring to FIGS. 7 and 8, when a plurality of earrings cutting lines 120 are provided in both ends of the mask body 100, the earrings 210 and 220 may be installed on the mask body 100 such that the center of the earrings 210 and 220 is adjacent to the earrings cutting lines and the ends of the earrings 210 and 220 are away from the mask body 100. At this time, one end and the other end of the earring 220 are knotted together to form a closed curve structure of the earring, or the earrings connection rod 300 is installed between one end and the other end to form the closed curve structure of the earring.

[0071] For example, when four earrings cutting lines 120 are provided in one end of the mask body 100, the second earring 220 penetrates the first earrings cutting line from the back side of the mask body 100 and then penetrates the second earrings cutting line from the front surface of the mask body 100. Subsequently, the second earring 220 penetrates the third earrings cutting line from the back side of the mask body 100 and then penetrates the fourth earrings cutting line from the front surface of the mask body 100.

[0072] As shown in FIG. 8, when three earrings cutting lines 120 are provided in one end of the mask body 100, an upper earrings cutting line in the shape of '-' is provided in the upper portion, a middle earrings cutting line in the shape of '] ' is provided in the middle portion, and a lower earrings cutting line in the shape of '-' is provided in the lower portion. At this time, the earring penetrates the first earrings cutting line from the back side of the mask body 100 and then penetrates the second earrings cutting line from the front surface of the mask body 100. Subsequently, the earrings are formed in a ring-shaped structure such as a 'Q' shape on the back side of the mask body 100 such that the wearer may adjust the length of the earrings and then again penetrates the second earrings cutting line from the back side of the mask body 100 and penetrates the third earrings cutting line from the front surface of the mask body 100.

[0073] In this way, when the earrings are coupled to the mask body 100 so as to penetrate the plurality of earrings cutting lines provided in the mask main body 100, both ends of the mask body 100 are sewn together by the earring, thereby providing the effect of reducing the leakage rate of the mask.

[0074] As a third embodiment, the cutting line according to the present invention may include a length adjustment cutting line 125 formed in both ends of the mask body 100 to make one end of the earrings 210 and 220 penetrate into the inside of the mask body 100 as shown in FIG. 3 and adjust the length of the earring.

[0075] If necessary, the mask body 100 according to the present invention may include a receiving hole in the inner or outer surface of the mask body 100 such that a sheet may be fitted therein, or a multi-purpose cutting line.

[0076] The multi-purpose cutting line is a configuration formed in plural in the bonding surface 102 such that a sheet providing an additional function may be inserted.

[0077] As a specific aspect, one multi-purpose cutting line according to the present invention may be formed in each of four sides of a rhombic virtual line located on the surface of the mask body 100 such that the vertex of the sheet having a rectangular structure may be fitted.

[0078] More specifically, the multi-purpose cutting line includes a first multi-purpose cutting line provided in the upper left end of the mask body 100, a second multi-purpose cutting line provided in the lower portion of the left end, a third multi-purpose cutting line provided in the upper portion of the right end of the mask body 100, and

a fourth multi-purpose cutting line provided in the lower portion of the right end. In this case, the second multi-purpose cutting line may be formed to be horizontally symmetrical with the first multi-purpose cutting line, and the third multi-purpose cutting line may be formed to be vertically symmetrical with the first multi-purpose cutting line. For example, the multi-purpose cutting line may be formed to have a length of 5 mm to 20 mm.

[0079] As the sheet, a functional pad such as a promotion pad, a humidification pad, an aroma pad, an oxygen pad, a deodorizing pad, etc. may be used.

[0080] Here, the functional pad means a pad that may be used for a special purpose during daily life or sleeping. For example, the humidification pad may prevent a problem that causes pain due to dry throat when patients with rhinitis have difficulty breathing through their nose during sleep. As such a humidification pad, a pad in which a liquid containing a green tea component or a mother chrysanthemum component is absorbed may be used to have a good humidification effect.

[0081] As the aroma pad, a pad in which a liquid containing aroma is absorbed may be used for relaxation and skin care purposes.

[0082] As the oxygen pad, a pad coated or impregnated with oxygen powder may be used, and a pad in which oxygen particles are attached or embedded may be used.

[0083] As the deodorizing pad, a pad coated with, impregnated, or embedded with a deodorizing material that adsorbs harmful gases or odors may be used.

[0084] While the functional pad may be used by interpolating one end to the multi-purpose cutting line, the functional pad may be embedded by including a cutting line sufficient to accommodate the pad in the inner filter or the outer filter.

[0085] As described above, the present invention may combine various functional pads such as the humidification pad and the aroma pad for treatment or healthcare purposes as well as the promotion pad with the mask.

[0086] FIG. 9 is an exploded front view showing a seventh embodiment of a mask according to the present invention, and FIG. 10 is a perspective view showing a seventh embodiment of the mask according to the present invention.

[0087] As a specific aspect, the mask body 100 according to the present invention may include a contact member.

[0088] The contact member is to temporarily reduce the upper and lower lengths of both ends of the mask body 100 such that the left and right ends are not separated from the wearer's face when the mask body 100 is covered on the wearer's face and provides the effect of bringing both ends of the mask body 100 into close contact with the wearer's face.

[0089] Specifically, the contact member includes a first cutting line 171 provided in the upper left end of the mask body 100 to form a first fastening protrusion, a first fastening protrusion cutting line 172 provided in the lower left end of the mask body 100 and into which the first fastening protrusion is inserted such that the upper left end is in close contact with the lower left end, a second cutting line 176 provided in the upper right end of the mask body 100 to form a second fastening protrusion, and a second fastening protrusion cutting line 177 provided in the lower right end of the mask body 100 and into which the second fastening protrusion is inserted such that the upper right end is in close contact with the lower right end.

[0090] The first cutting line 171 has an open curve structure such that the first fastening protrusion is not separated while protruding from the mask body 100 by the manipulation of a user. In addition, the first cutting line 171 may be formed to have a structure such as an arrow shape, a triangle, a square, etc.

[0091] While the first fastening protrusion cutting line 172 may be formed in any structure as long as the first fastening protrusion may penetrate, the first fastening protrusion cutting line 172 may be formed in a 'ㅗ' shape, a cross shape, or a straight shape. At this time, the 'ㅗ' shaped cutting line 172 also provides a function of a hooking projection such that the interpolated first fastening protrusion is not removed.

[0092] If necessary, the contact member may include a first additional cutting line 173 between the first cutting line 171 and the first fastening protrusion cutting line 172. Such a first additional cutting line 173 is to provide a space which the first fastening protrusion is to penetrate such that the left end of the mask body 100 is in close contact with three layers according to the size of the wearer's face, and may be formed in the straight shape, the cross shape, or the 'ㅗ' shape.

[0093] The first cutting line 171 and the first fastening protrusion cutting line 172 may provide a function of reducing the vertical length of the left end of the mask body 100, and also provide a function of the earrings cutting line for coupling the earrings to the mask body 100 as shown in FIG. 9 according to the selection of the user.

[0094] The second cutting line 176 has an open curve structure such that the second fastening protrusion protrudes and is not separated from the mask body 100 by the manipulation of the user. In addition, the second cutting line 176 may be formed to have a structure such as an arrow shape, a triangle, a square, etc.

[0095] While the second fastening protrusion cutting line 177 may be formed in any structure as long as the second fastening protrusion may penetrate, the second fastening protrusion cutting line 17 may be formed in the 'ㅗ' shape, the cross shape, or the straight shape.

[0096] If necessary, the contact member may include a second additional cutting line 178 between the second cutting line 176 and the second fastening protrusion cutting line 177. Such a second additional cutting line 178 is to provide a space which the second fastening protrusion is to penetrate such that the right end of the mask body 100 is in close contact with three layers according to the size of the wearer's face, and may be formed in

the 'ㅗ' shape, or the cross shape.

[0097] The second cutting line 176 and the second fastening protrusion cutting line 177 may provide a function of reducing the vertical length of the right end of the mask body 100, and also provide a function of the earrings cutting line for coupling the earrings to the mask body 100 as shown in FIG. 9 according to the selection of the user.

[0098] As a third embodiment, the cutting line according to the present invention may include an edge cutting line (not shown) formed in the inner direction of the mask body 100 in the edges of the left and right ends of the mask body 100 such that the earrings 210 and 220 are fitted into the mask body 100 and wound around the left and right ends of the mask body 100. More specifically, the edge cutting line includes a first edge cutting line provided in the upper edge of the left end of the mask body 100, a second edge cutting line provided in the lower edge of the left end of the mask body 100, a third edge cutting line provided in the upper edge of the right end of the mask body 100 and a fourth edge cutting line provided in the lower edge of the right end of the mask body 100. The edge cutting line 120 provides a passage through which a part of the earrings 210 and 220 may be wound around the edges of the left and right ends according to the selection of the user. For example, the third edge cutting line provides a passage through which an adjacent portion of one end of the second earring 220 may be wound, and the fourth edge cutting line provides a passage through which an adjacent portion of the other end of the second earring 220 may be wound. Such an edge cutting line 120 may be formed to have a length of 3 mm to 10 mm.

[0099] Referring to FIGS. 1 to 10, the mask according to the present invention includes the earrings 210 and 220.

[0100] The earrings 210 and 220 are respectively provided on the left and right sides of the mask body 100 to hang on the wearer's ears, and provide a function of pulling the mask body 100 in the face direction such that the mask body 100 may be positioned on the wearer's face.

[0101] The earrings 210 and 220 may be made of a known material having elasticity such as nylon for length adjustment.

[0102] The earrings 210 and 220 are composed of the first earring 210 provided at the left end of the mask body 100 and the second earring 220 provided at the right end of the mask body 100.

[0103] And when the earrings 210 and 220 are formed in a closed curve structure, one side of the first earring 210 may be coupled to the upper left side of the mask body 100, and the other side opposite to the one side may be coupled to the lower left side of the mask body 100.

[0104] In this way, when the first earring 210 is formed in a closed curve structure, the first earring 210 may be wound along the left edge of the mask body 100, and when the first earring 210 is formed in an open curve structure, one end and the other end may respectively penetrate different earrings cutting lines provided in the left side of the mask body 100.

[0105] In addition, the second hanging earrings 220 formed in a closed curve structure may have one side coupled to the upper right side of the mask body 100, and the other side opposite to the one side coupled to the lower right side of the mask body 100.

[0106] In this way, when the second hanging earrings 220 is formed in a closed curve structure, the second hanging earrings 220 may be wound along the right edge of the mask body 100, and when the second hanging earrings 220 is formed in an open curve structure, one end and the other end may respectively penetrate different earrings cutting lines provided in the right side of the mask body 100.

[0107] In addition, the earrings 210 and 220 may be wound around the mask body 100 through the cutting line described above according to the selection of the wearer, and the length thereof may be adjusted.

[0108] If necessary, the earrings 210 and 220 formed in an open curve structure may be formed such that both end portions have a structure thicker than the central portion as shown in FIG. 2. This is to prevent the earrings cutting line 120 from penetrating so as not to separate from the mask body 100 after the end portions of the earrings 210 and 220 penetrate the earrings cutting line 120 by an external force of the user, even if an external force pulling the end portions in the direction opposite to the interpolation direction is applied.

[0109] In addition, the earring formed in an open curve structure may include the first earring 210, a pair of first earring clips (not shown) installed to be spaced apart from each other along the longitudinal direction of the first earring 210 and connecting the first earring 210 to the left end of the mask body 100, the second earring 220, and a pair of second earring clips (not shown) installed to be spaced apart from each other along the longitudinal direction of the second earring 220 and connecting the second earring 220 to the right end of the mask body 100.

[0110] At this time, the first earring clip and the second earring clip may be formed to have a tongs shaped or ring shaped structure. In this case, the wearer's left ear is positioned in a space between the pair of first earring clips, and the wearer's right ear is positioned in a space between the pair of second earring clips.

[0111] In addition, when the first earring clip is formed to have the tongs structure, the first earring clip combines the first earring 210 and the mask body 100 while holding the first earring 210 and the mask body 100 together.

[0112] In addition, when the first earring clip is formed to have the ring shaped structure, the first earring clip hooks and combines the first earring 210 to the cutting line of the mask body 100.

[0113] Meanwhile, the mask of the present invention may be worn on the neck such that the mask does not

fall to the floor even if the mask is separated from the wearer's face by an external force and is hooked on the wearer's neck. To this end, one end of the first earring and one end of the second earring may be connected to each other. At this time, one end of the first earring and one end of the second earring may be knotted and connected, or may be connected by the above-mentioned earrings connection rod. If necessary, the first earring and the second earring may be configured as a single earring formed in a row.

[0114] Referring to FIGS. 1 and 10, the mask according to the present invention may further include the earrings connection rod 300.

[0115] The earrings connection rod 300 is used according to the selection of the user when using earrings formed in an open curve structure, and converts the earrings to a closed curve structure such that the earrings connection rod 300 is coupled to one end of the earrings having the open curve structure and the other end of the earrings to hang on the wearer's ear. If necessary, the earrings connection rod 300 may also be used for earrings formed in a closed curve structure for pain relief and the like.

[0116] If necessary, the earrings connection rod 300 may be made of a material such as silicone, rubber, or plastic foam. This is to relieve pain in the ear when the earrings connection rod 300 comes into contact with the user's ear, and, even if a pulling force is applied to the interpolated earring, to prevent separation from the earrings connection rod 300 by generating a frictional force with the earrings and the earrings connection rod 300.

[0117] The earrings connection rod 300 may be formed in any structure as long as the earrings connection rod 300 is coupled to one end and the other end of the earrings formed in an open curve structure to form the earrings formed in the open curve structure as that of a closed curve structure.

[0118] As a first embodiment, the earrings connection rod 300 according to the present invention may be formed in a clip structure that presses together one end of the earrings and the other end of the earrings to connect the entire earrings in a closed curve structure.

[0119] As a second embodiment, the earrings connection rod 300 according to the present invention may be formed in a ring-shaped structure or a rod-shaped structure that presses together one end of the earrings and the other end of the earrings to connect the entire earrings in a closed curve structure.

[0120] Here, the rod-shaped structure may be formed in a 'U' shape such that the earrings connection rod 300 may be smoothly wound around the user's ear. At this time, one end of the earrings 210 and 220 are interpolated into the front end of the earrings connection rod 300, and the other end of the earrings 210 and 220 is interpolated into the rear end of the earrings connection rod 300. To this end, the earrings connection rod 300 has an interpolation passage through which the earrings 210 and 220 may be inserted in the longitudinal direction.

[0121] In addition, an opening through which the earrings are exposed to the outside may be provided in the interpolation passage of the earrings connection rod 300. This is to expose one end of the earrings and the other end of the earrings penetrating the interpolation passage to the outside of the earrings connection rod 300. At this time, the wearer may adjust the length of the earrings wrapping the wearer's ear by pulling the end of the earrings exposed to the outside of the earrings connection rod 300.

[0122] In addition, the interpolation passage may be formed to have an inner diameter smaller than an outer dimeter of the earrings 210 and 220 such that the earrings 210 and 220 may not be separated from the insertion passage of the earrings connection rod 300 even if a pulling force is applied to the earrings after the ends of the earrings 210 and 220 are interpolated. In particular, the inner diameter of the tip to which the ends of the earrings 210 and 220 enter may be the narrowest, and the inner diameter may be formed to gradually increase in the longitudinal direction.

[0123] In addition, the earrings connection rod 300 may include an earring interpolation cutting line connected to the interpolation passage along the longitudinal direction such that the ends of the earrings 210 and 220 may be easily interpolated into the interpolation passage. At this time, the earring interpolation cutting line is preferably provided in a direction opposite to the surface facing the mask body 100 as shown in FIG. 9 such that the earrings are not separated from the earrings connection rod 300 by the pulling force applied to the earrings.

[0124] As a third embodiment, the earrings connection rod 300 according to the present invention may include a first earrings connection rod and a second earrings connection rod that may be assembled with or separated from each other.

[0125] The first earrings connection rod includes a first interpolation passage through which one end of the earrings may be interpolated along the longitudinal direction such that the entire length of the earrings of the mask may be adjusted, a first cutting line connected to the first interpolation passage along the longitudinal direction such that one end of the earrings is interpolated into the first interpolation passage, and a coupling protrusion on the end. In addition, the first earrings connection rod may include a first opening connected to the first interpolation passage in the surface such that one end of the earrings may be disposed outside after penetrating the first earrings connection rod.

[0126] The second earrings connection rod includes a second interpolation passage through which the other end of the earrings may be interpolated along the longitudinal direction such that the entire length of the earrings of the mask may be adjusted, a second cutting line connected to the second interpolation passage along the longitudinal direction such that the other end of the earrings is interpolated into the second interpolation passage, and a coupling grove assembled with and connected to the

coupling protrusion in the end facing the first earrings connection rod. In addition, the second earrings connection rod may include a second opening connected to the second interpolation passage in the surface such that the other end of the earrings may be disposed outside after penetrating the second earrings connection rod.

[0127] Such a coupling protrusion may be formed in a cylinder, a square pillar, a square pillar, a pentagonal pillar, etc. such that the coupling protrusion may be interpolated and coupled to the coupling groove, and the coupling groove may be also formed in a structure corresponding to the coupling protrusion such that the coupling protrusion may be interpolated.

[0128] In particular, when the coupling protrusion is formed in a cylindrical structure, a screw thread may be formed on the surface of the coupling protrusion for a firm coupling with the coupling groove, and a screw groove may be formed in the coupling groove.

[0129] In this way, the earrings connection rod 300 may be used as an ear pain protector because the earrings connection rod 300 may be fitted in not only the earrings of the open curve structure but also the earrings of the closed curve structure, and may also provide an earrings adjustment function because the earrings may be pulled and fixed.

[0130] As a fourth embodiment, the earrings connection unit 300 according to the present invention may include a first snap button and a second snap button that may be assembled with or separated from each other.

[0131] The first snap button is installed on one end of the earrings, and the second snap button is installed on the other end of the earrings. The first snap button and the second snap button connect one end and the other end of earrings formed in an open curve structure by an external force of the user.

Claims

1. A mask comprising a mask body that covers wearers' mouth and nose, and earrings respectively provided on left and right sides of the mask body,
   wherein the mask body comprises a cutting line or an unevenness portion capable of selectively attaching and detaching the earrings to and from the mask body.

2. The mask according to claim 1,
   wherein the mask body comprises a length adjustment cutting line formed in both ends of the mask body to make one end of the earrings penetrate into the inside of the mask body and adjust the length of the earring, formed in both ends of the mask body 100 to make one end of the earrings 210 and 220 penetrate into the inside of the mask body 100 as shown in FIG. 3 and adjust the length of the earring.

3. The mask according to claim 1, or 2,
   wherein the cutting line comprises a hooking cutting line in the shape of a hooking body provided inside of the mask body such that the earrings are wound around left and right ends of the mask body.

4. The mask according to claim 1, 2, or 3, wherein the cutting line is formed in a closed curve structure.

5. The mask according to claim 4, wherein the unevenness portion comprises a concave portion, a convex portion, or both of them that form a hooking space in an inner direction of the mask body on edges of the left and right ends such that the earrings are wound around the left and right ends of the mask body.

6. The mask according to any one of claims 1 to 5, wherein the earrings are formed in an open curve structure.

7. The mask according to claim 6, further comprising:
   an earrings connection rod coupled to one end of the earrings having the open curve structure and the other end of the earrings to convert the earrings to have a closed curve structure.

8. The mask according to claim 8, wherein the earrings connection rod comprises:

   a first earrings connection rod comprising a first interpolation passage through which one end of the earrings is interpolated along a longitudinal direction such that an entire length of the earrings of the mask is adjusted, a first cutting line connected to the first interpolation passage along the longitudinal direction such that one end of the earrings is interpolated into the first interpolation passage, and a coupling protrusion on the end; and
   a second earrings connection rod comprising a second interpolation passage through which the other end of the earrings is interpolated along the longitudinal direction such that the entire length of the earrings of the mask is adjusted, a second cutting line connected to the second interpolation passage along the longitudinal direction such that the other end of the earrings is interpolated into the second interpolation passage, and a coupling grove assembled with and connected to the coupling protrusion in the end facing the first earrings connection rod.

9. The mask according to claim 6, 7, or 8,
   wherein the earrings comprise:

   a first earring;
   a pair of first earring clips installed to be spaced apart from each other along the longitudinal di-

rection of the first earring and connecting the first earring to a left end of the mask body;
a second earring; and
a pair of second earring clips installed to be spaced apart from each other along the longitudinal direction of the second earring and connecting the second earring to a right end of the mask body.

10. The mask according to claim 9,
Wherein one end of the first earring and one end of the second earring are connected to each other such that the earrings are worn on a wearer's neck.

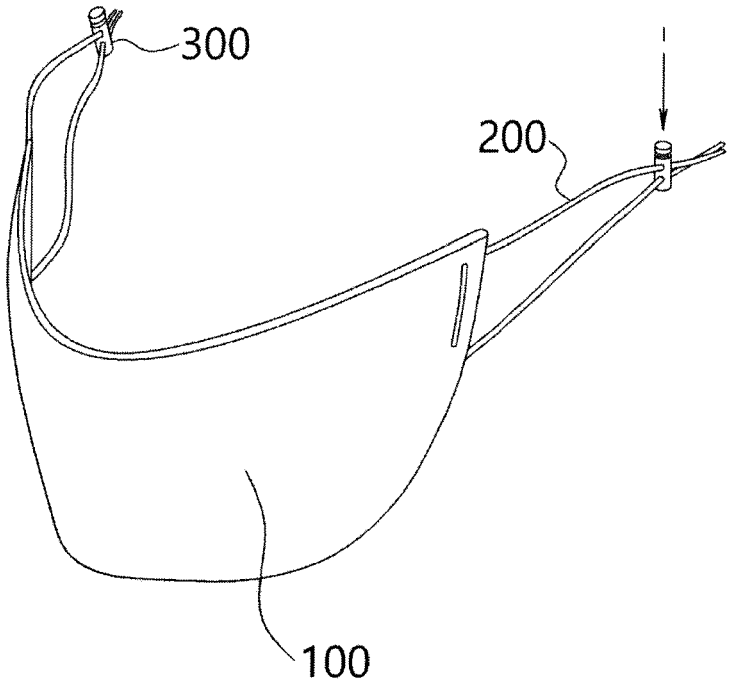
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Fig. 1

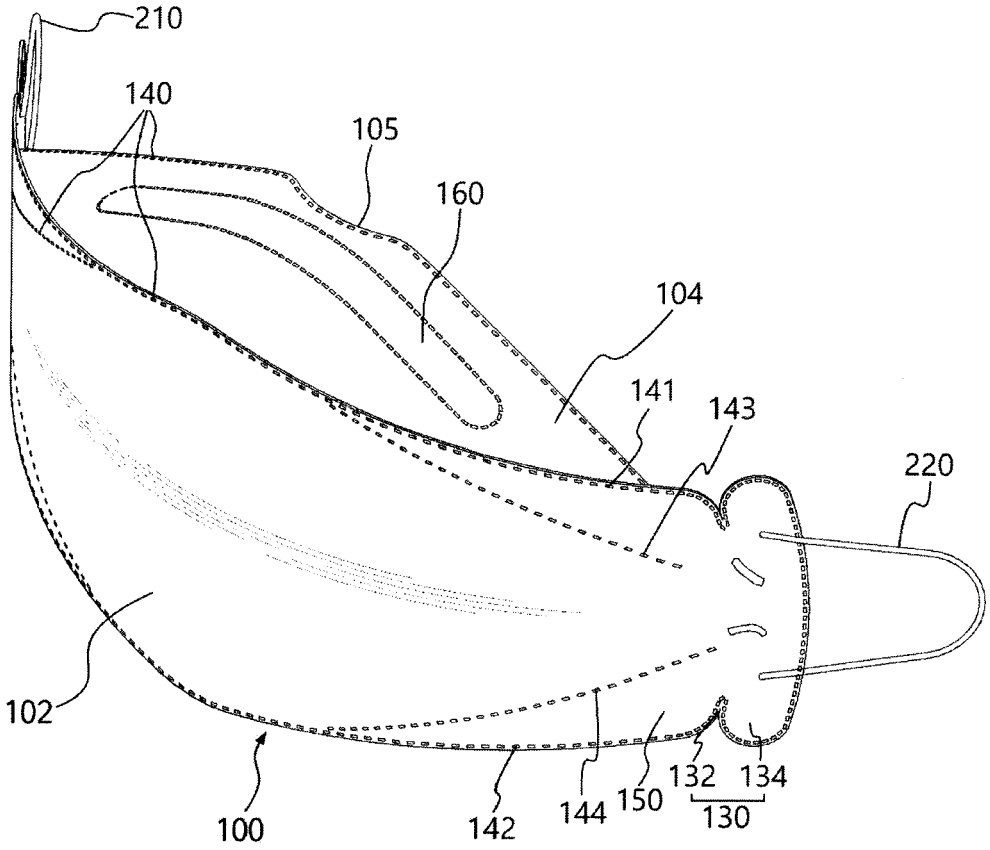
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Fig. 2

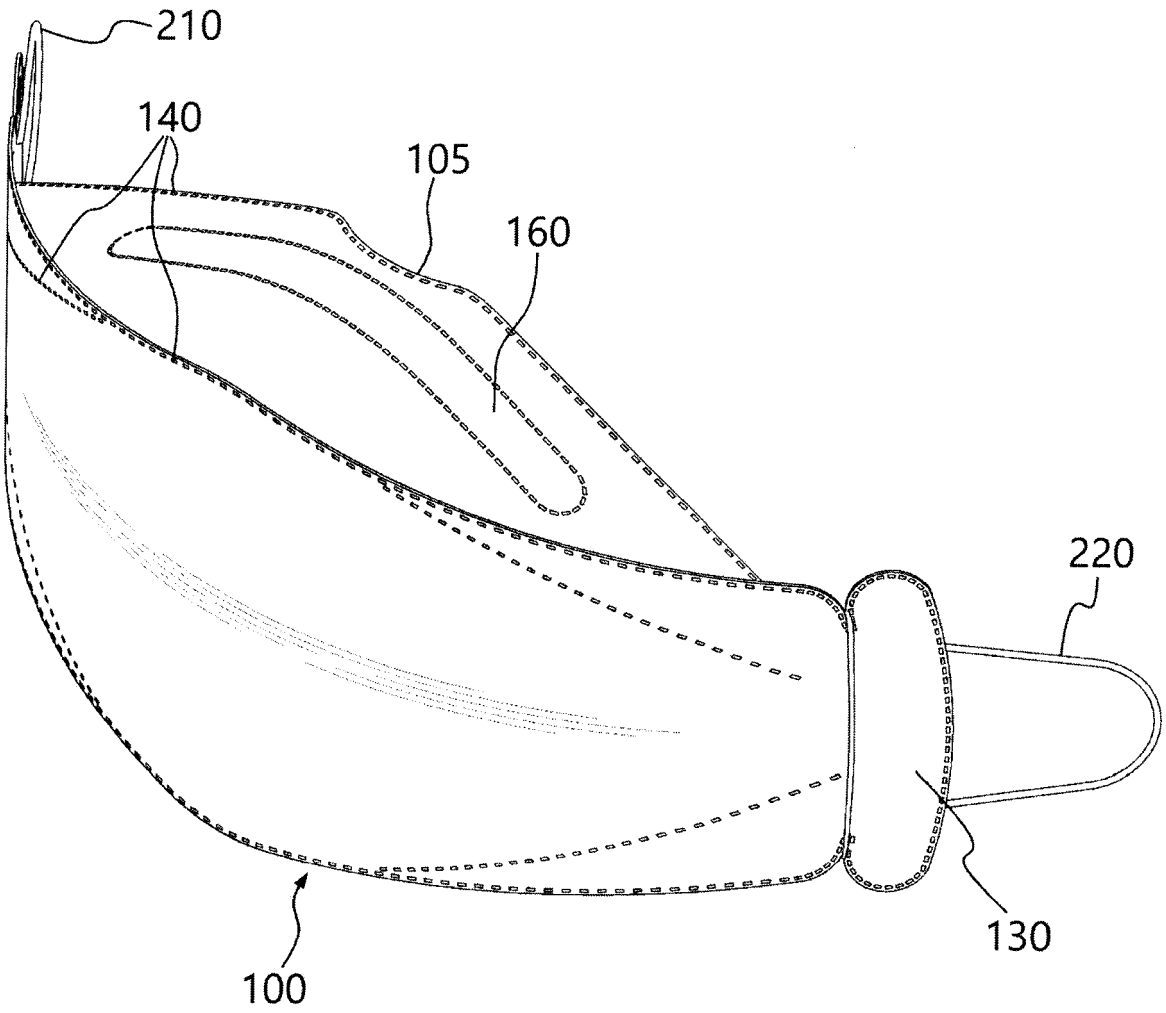

Fig. 3

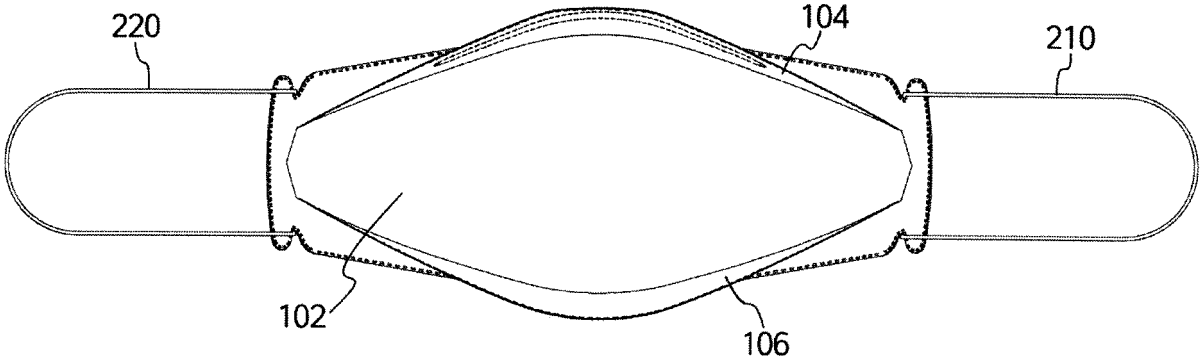

Fig. 4

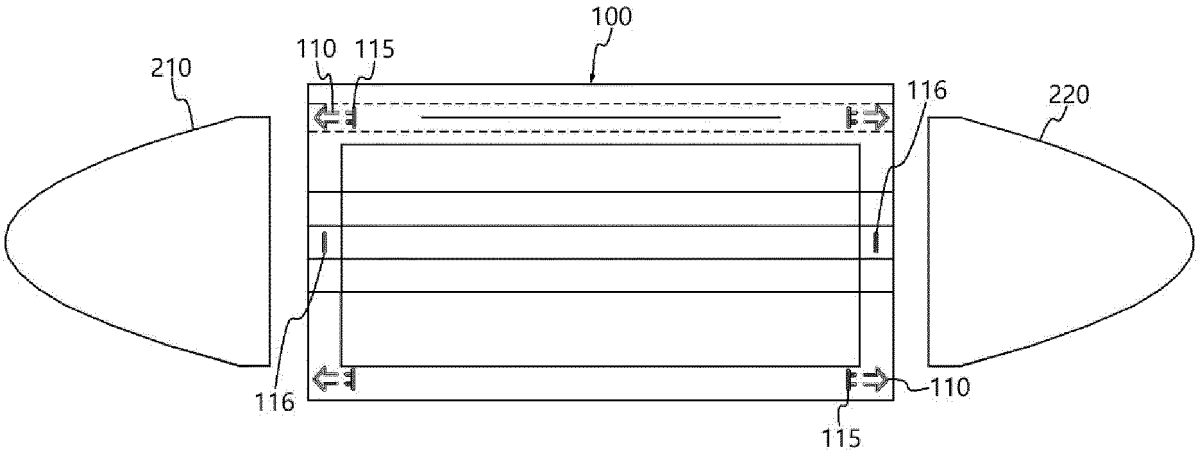
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Fig. 5

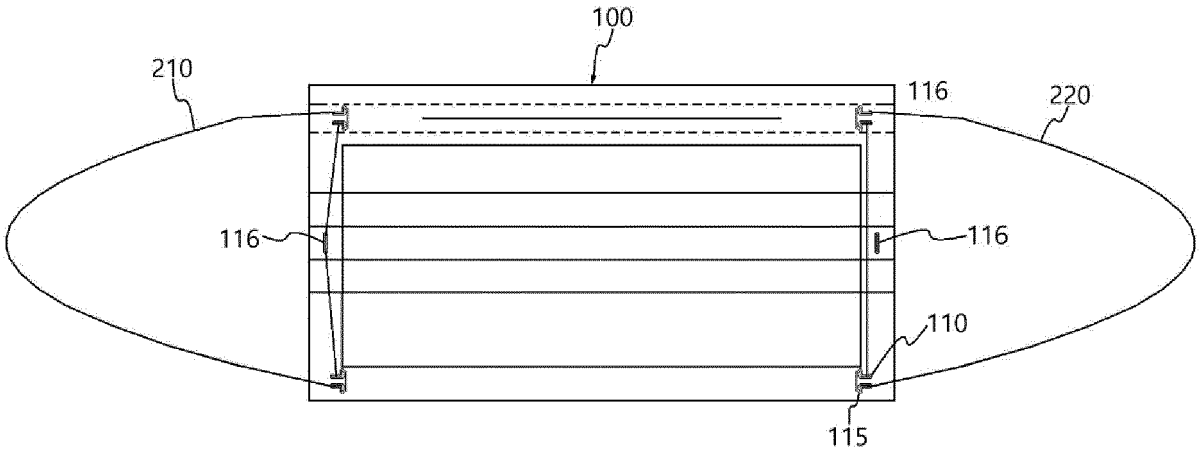
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Fig. 6

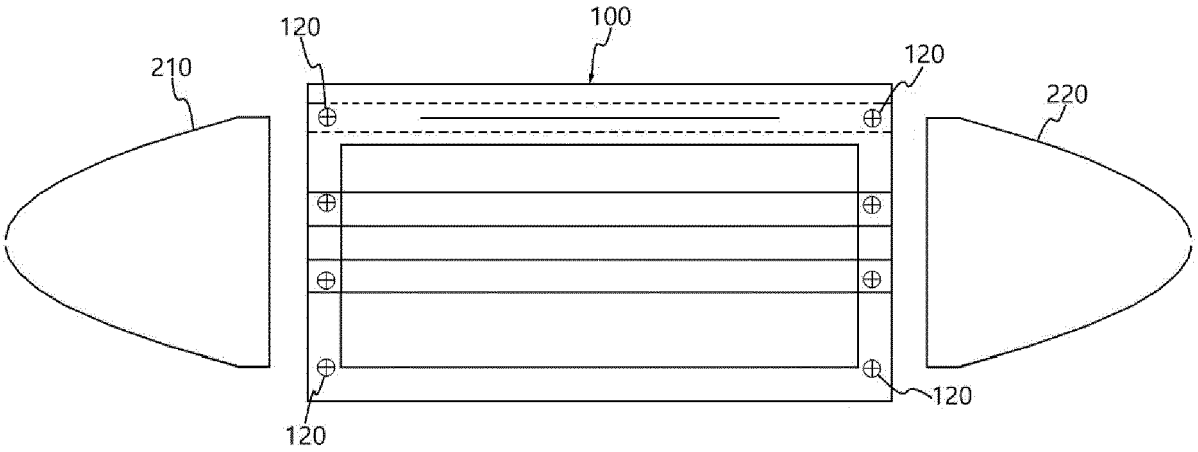

Fig. 7

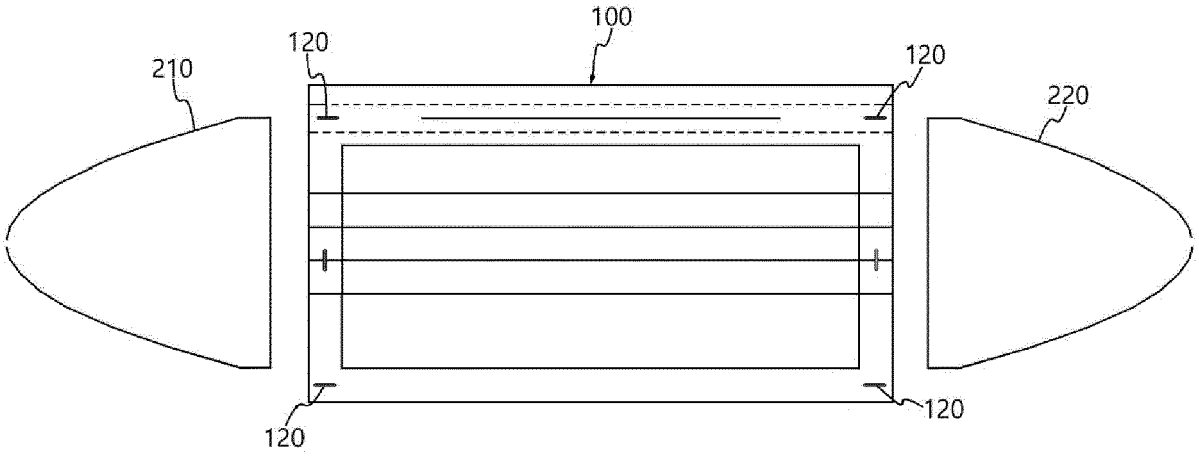

Fig. 8

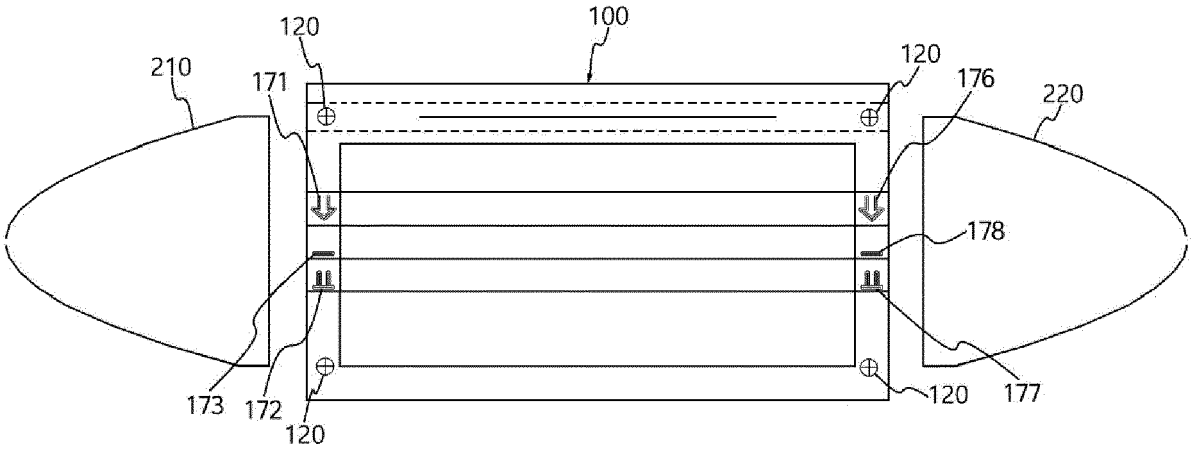
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Fig. 9

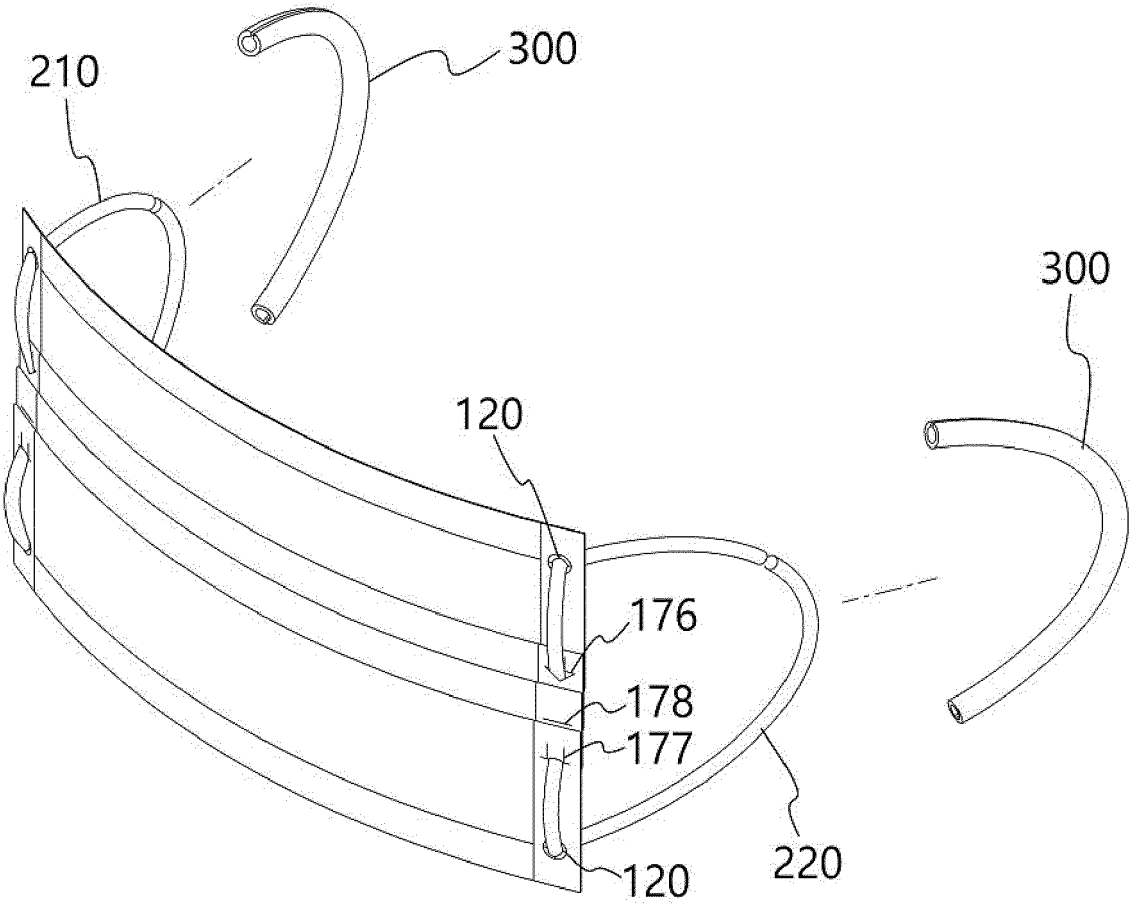
210
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Fig. 10

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EUROPEAN SEARCH REPORT

Application Number
EP 20 21 4525

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	29 May 2021	Gkama, Alexandra

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