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(54) **MASK**

(57) A mask has a main body (10) and at least one attaching member (13). The main body is a flexible material and has at least one folded section (11) at a middle portion. Two short edges of the main body are formed by a hot melt press process to provide two sealed edges (12) for securing the folded sections and the attaching member. The two sealed edges have at least one horizontal, cut-open gap (121). The cut-open gap allows the two sealed edges to form at least one overlapped portion (122) and the two sealed edges are respectively curved as an arced edge. The overlapped portions increase the sealing effect of the two sealed edges, which greatly improves the covering effect of the main body, and indeed prevents bacteria and viruses in the air from invading from both sides of the main body to help improve the safety and the protection effect of the main body.

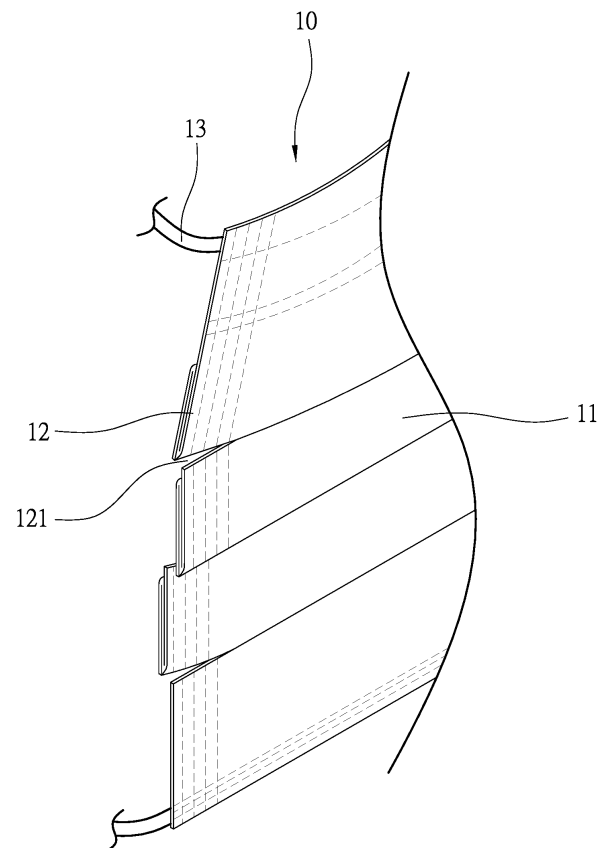


FIG. 2

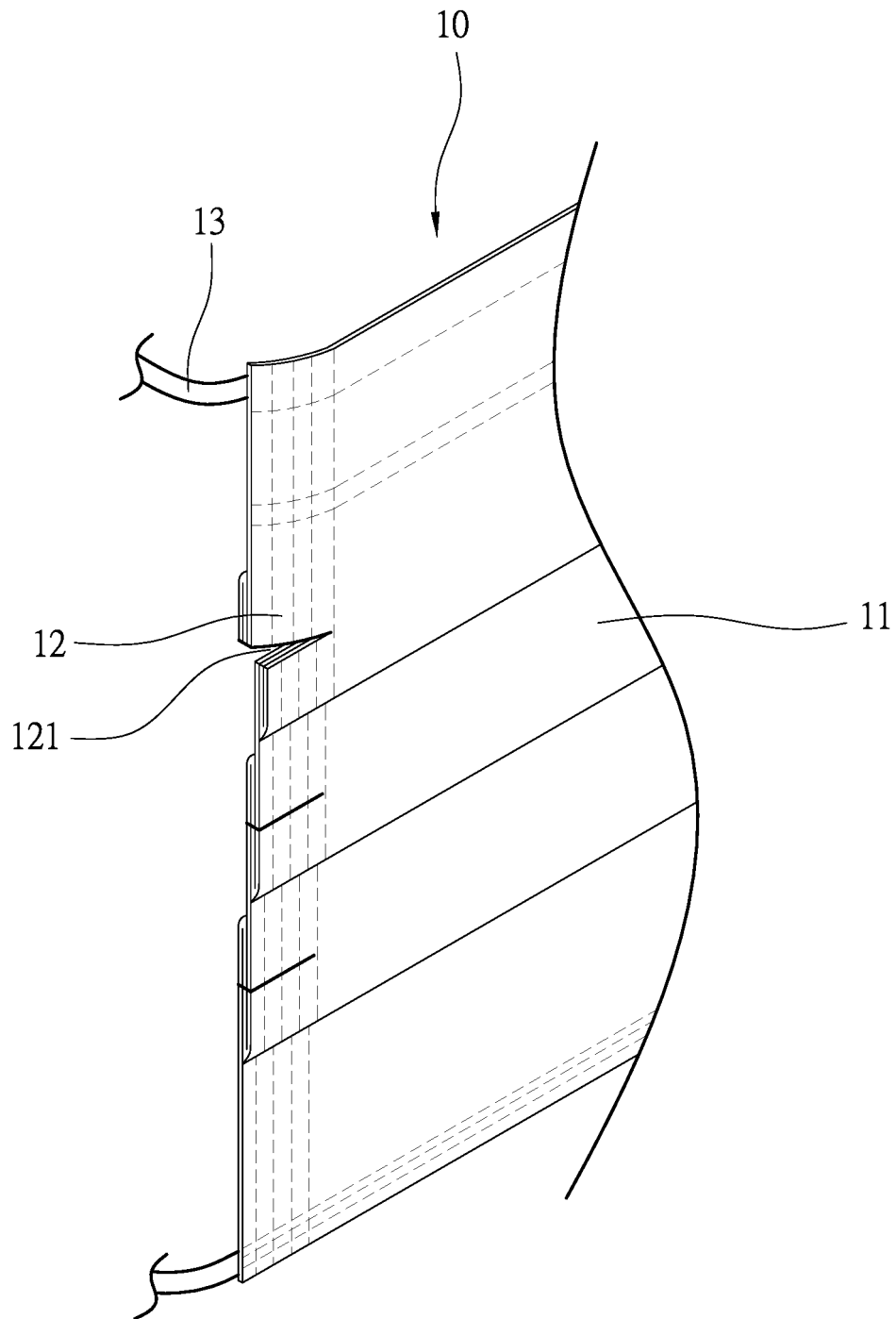


FIG. 3

Description

BACKGROUND OF INVENTION

FIELD OF INVENTION

[0001] The present invention relates to a facial respiratory mask.

DESCRIPTION OF RELATED ART

[0002] According to the conventional mask structure, please refer to FIGs 6, 7, and 8. The mask 20 is a flat mask and the mask 20 is folded to have a plurality of the folded sections 21. The folded sections 21 of the mask 20 can be stretched and unfold and the edges of the two sides of the mask 20 are thermally pressed to form two edge sealing portions 22. The two edge sealing portions 22 also secure the folded section 21 on both sides of the mask 20. When the folded section 21 of the mask 20 is stretched and unfold, the two short sides of the mask 20 are secured by the edge sealing portion 22 to avoid being stretched and unfolded, and the mask 20 further includes ear loops 23 attached to the two edge sealing portions 22.

[0003] When the conventional mask 20 is used, the folded sections 21 are first stretched out and placed on the outside of the mouth and nose, and the ear straps 13 are worn on both ears, so as to isolate the outside air to prevent pollution and mouth spit transmission. However, since the two ends of the ear loop 23 are connected to the upper and lower positions of the edge sealing portion 22, when the mask 20 is worn, the edge sealing portion 22 is only pulled at the upper and lower positions because of the ear loop 23, the middle position of the edge sealing portion 22 is squeezed and deformed. As a result, the edges on both short sides of the mask 20 cannot firmly cover the user's cheek skin, thereby causing an opening 24 is formed between the short edges of the mask 20 and the cheeks, which greatly reduces the covering effect of the mask 20, so that bacteria and viruses in the air can easily invade the inside of the mask 20 from the openings 24 on both sides.

[0004] Therefore, it is desirable to provide a facial respiratory mask to mitigate and/or obviate the aforementioned problems.

SUMMARY of INVENTION

[0005] An objective of present invention is to provide a facial respiratory mask, which is capable of improving the above-mention problems.

[0006] In order to achieve the above mentioned objective, a mask has a main body and at least one attaching member.

[0007] The main body is a flexible material and has at least one folded section at a middle portion. Two short edges of the main body are formed by a hot melt press process to provide two sealed edges for securing the

folded sections and the attaching member. The two sealed edges have at least one horizontal, cut-open gap. The cut-open gap allows the two sealed edges to form at least one overlapped portion and the two sealed edges are respectively curved as an arced edge. The overlapped portions increase the sealing effect of the two sealed edges, which greatly improves the covering effect of the main body, and indeed prevents bacteria and viruses in the air from invading from both sides of the main body to help improve the safety and the protection effect of the main body.

[0008] Other objects, advantages, and novel features of invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0009]

FIG. 1 is a perspective view of a preferred embodiment of the present invention.

FIG. 2 is a partially enlarged perspective view according to the preferred embodiment of the present invention.

FIG. 3 is a schematic drawing of the actual wearing state according to the preferred embodiment of the present invention.

FIG. 4 is a partial enlarged schematic drawing of the actual wearing state according to the preferred embodiment of the present invention.

FIG. 5 is a perspective view of another embodiment of the present invention.

FIG. 6 is a three-dimensional view of a conventional mask.

FIG. 7 is a schematic drawing of the actual wearing state of the conventional mask.

FIG. 8 is a partial enlarged schematic drawing of the actual wearing state of the conventional mask.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0010] Please refer to FIGs. 1 and 2. A mask comprises a main body 10 and at least one attaching member 13. The main body 10 is a flexible material and has at least one folded section 11 at a middle portion, two short edges of the main body 10 are formed by a hot melt press process to provide two sealed edges 12 for securing the folded sections 11 and the attaching member 13 such as a pair of ear loops, and the two sealed edges 12 restrict

the expansion of the short edge of the main body 10. The two sealed edges 12 have at least one horizontal, cut-open gap 121 wherein the cut-open gap 121 allows the two sealed edges 12 to form at least one overlapped portion 122 and the two sealed edges 12 are respectively curved as an arced edge.

[0011] The main body 10 is composed of a plurality of woven materials edged by the hot melt press and cut processes to form the two sealed edges 12. During the hot melt press and cut processes, the two sealed edges 12 of the main body 10 are cut to form the cut-open gaps 121 with predetermined distance without affecting the protection effect of the main body 10. A length of the cut-open gap 121 of the main body 10 is at least half of a length of the sealed edge 12, or a length of the cut-open gap 121 of the main body 10 is equal to a length of the sealed edge 12. Moreover, the two sealed edges 12 have a plurality of cut-open gaps 121, and the cut-open gaps 121 are formed beyond the folded section 11 of the two sealed edges 12 or cut-open gaps 121 are formed on the folded section 11 of the two sealed edges 12.

[0012] For the actual state of its structure, please refer to FIGs 1, 2, 4, and 5. The main body 10 also includes the ear straps 13 attached to the two sealed edges 12, the folded section 11 of the main body 10 is first stretched out and placed to cover the mouth and nose, and then the ear straps 13 are placed on both ears through, to achieve the purpose of isolating external air pollution and preventing the infection of mouth foam. The two ends of the ear straps 13 are respectively connected to the upper and lower positions of the sealed edge 12, so that when the main body 10 is worn, the sealed edge 12 will only be pulled at the upper and lower positions due to the ear straps 13, and with the cut-open gaps 121, the two sealed edges 12 are retracted and interlaced to form at least an overlapped portion 122 and forms an arc shape corresponding to the size of the face. Therefore, the two sealed edges 12 stay close to the skin, and the overlapped portion 122 formed by the cut-open gap 121 increases the sealing effect of the two sealed edges 12, which greatly improves the covering of the main body 10 and indeed prevents bacteria and viruses in the air from invading both sides of the main body 10.

[0013] With the structure of the above specific embodiment, the following benefits can be obtained: The sealed edge 12 of the main body 10 has at least one cut-open gap 121, when the two sealed edges 12 are pulled by the ear straps 13, the cut-open gaps 121 make the two sealed edges 12 to be retracted and interlaced to form at least an overlapped portion 122, so that the two sealed edges 12 can be more fitted on the cheek skin. At the same time, the overlapped portions 122 formed by the cut-open gaps 121 increase the sealing effect of the two sealed edges 12, which greatly improves the covering effect of the main body 10, and indeed prevents bacteria and viruses in the air from invading from both sides of the main body 10 to help improve the safety and the protection effect of the main body 10.

[0014] In addition, the design of the cut-open gap 121 of the main body 10 helps to improve the variability of the two sealed edges 12, so that the two sealed edges 12 can be properly retracted according to the different face shapes, while maintaining the covering effect of the two sealed edges 12, which is suitable for various face shapes.

[0015] Although the present invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of invention as hereinafter claimed.

Claims

1. A mask comprising: a main body and at least one attaching member; the main body being a flexible material and having at least one folded section at a middle portion, two short edges of the main body formed by a hot melt press process to provide two sealed edges for securing the folded sections and the attaching member, the two sealed edges having at least one horizontal, cut-open gap; wherein the cut-open gap allows the two sealed edges to form at least one overlapped portion and the two sealed edges are respectively curved as an arced edge.
2. The mask as claimed in claim 1, wherein the main body has a plurality of folded sections, and the two sealed edges of the main body both have a plurality of cut-open gaps.
3. The mask as claimed in claim 2, wherein the cut-open gap of the main body is located beyond the folded section of the two sealed edges.
4. The mask as claimed in claim 2, wherein the cut-open gap of the main body is located on the folded section of the two sealed edges.
5. The mask as claimed in claim 1, wherein a length of the cut-open gap of the main body is at least half of a length of the sealed edge.
6. The mask as claimed in claim 1, wherein a length of the cut-open gap of the main body is equal to a length of the sealed edge.

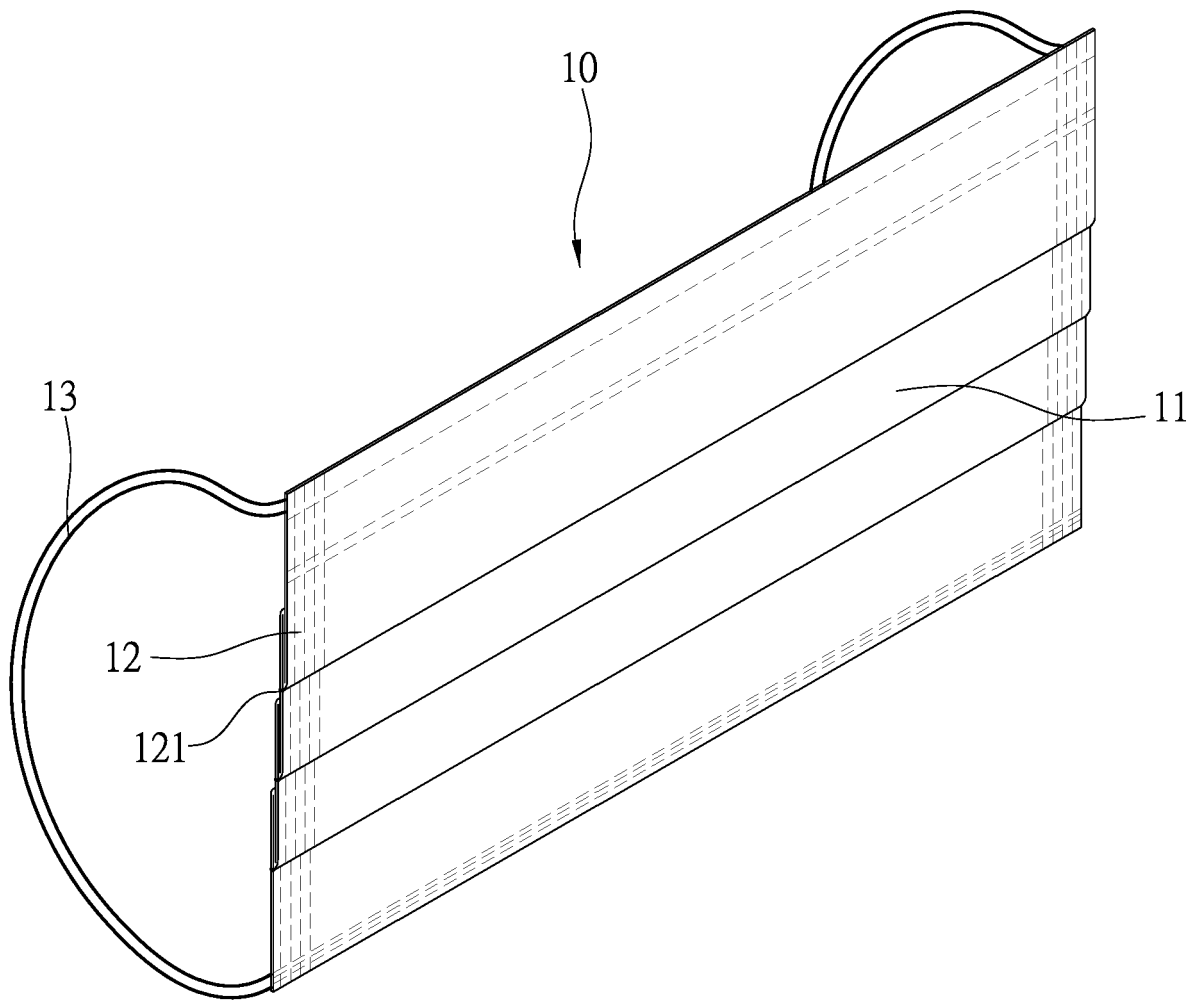


FIG. 1

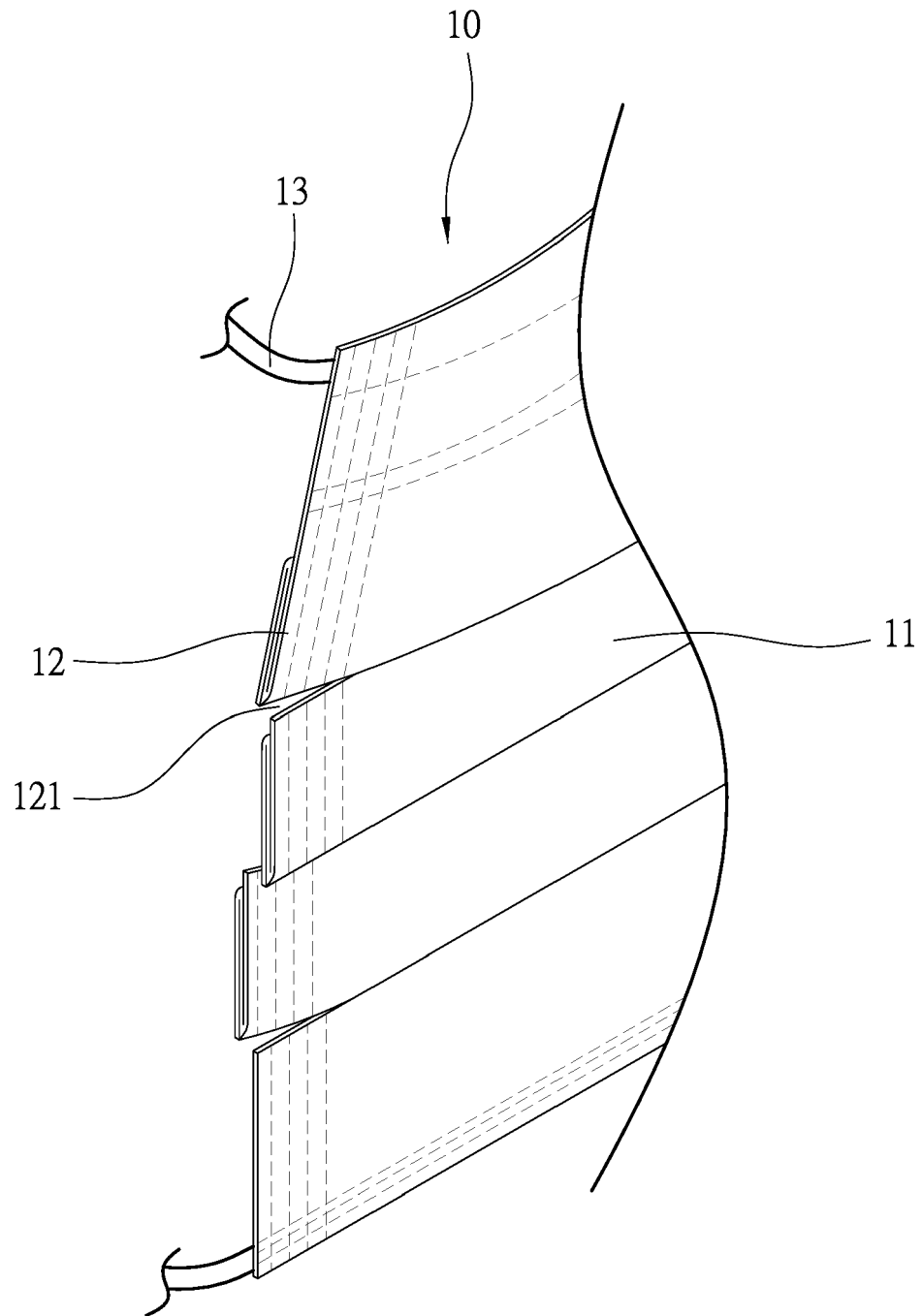


FIG. 2

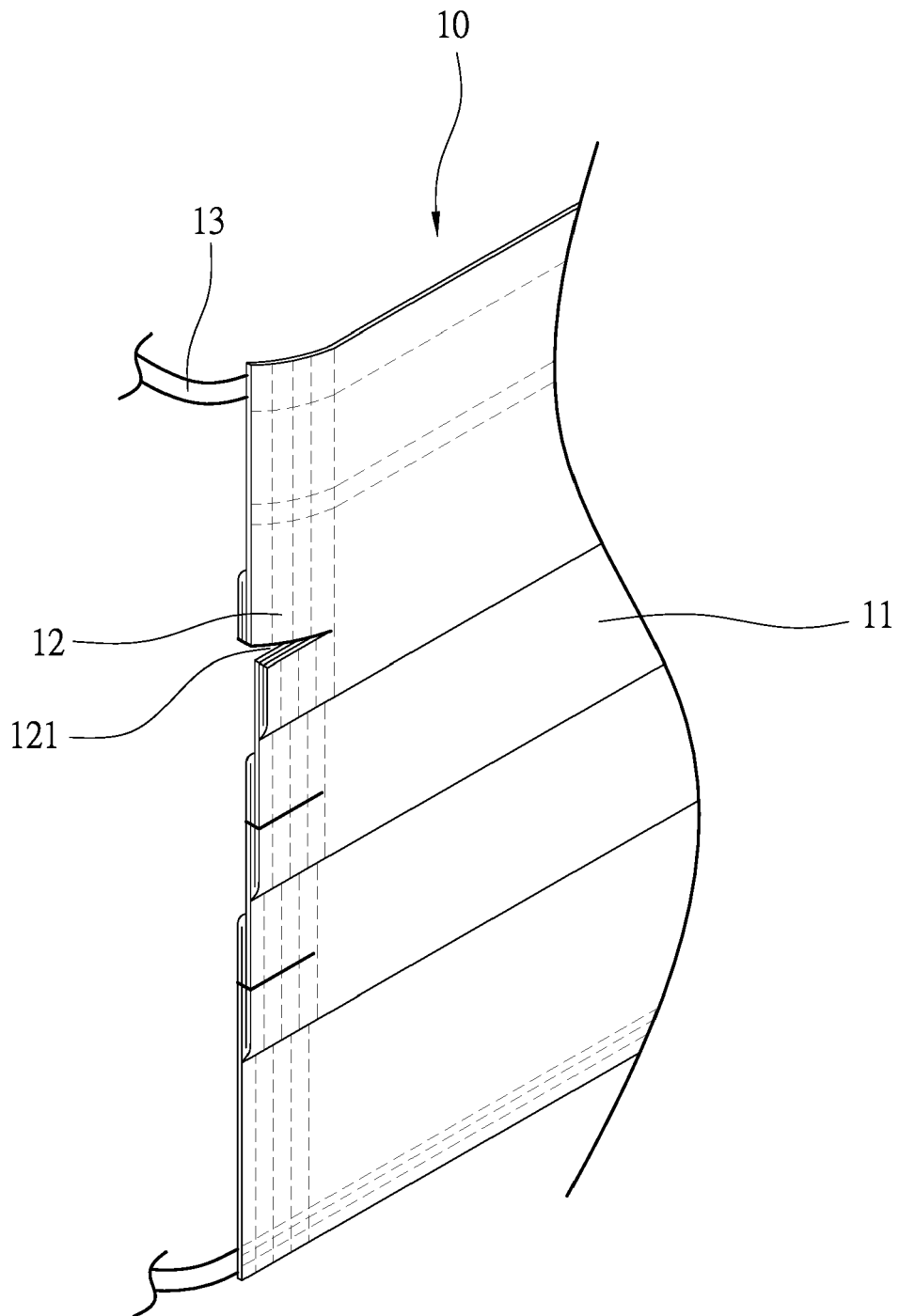


FIG. 3

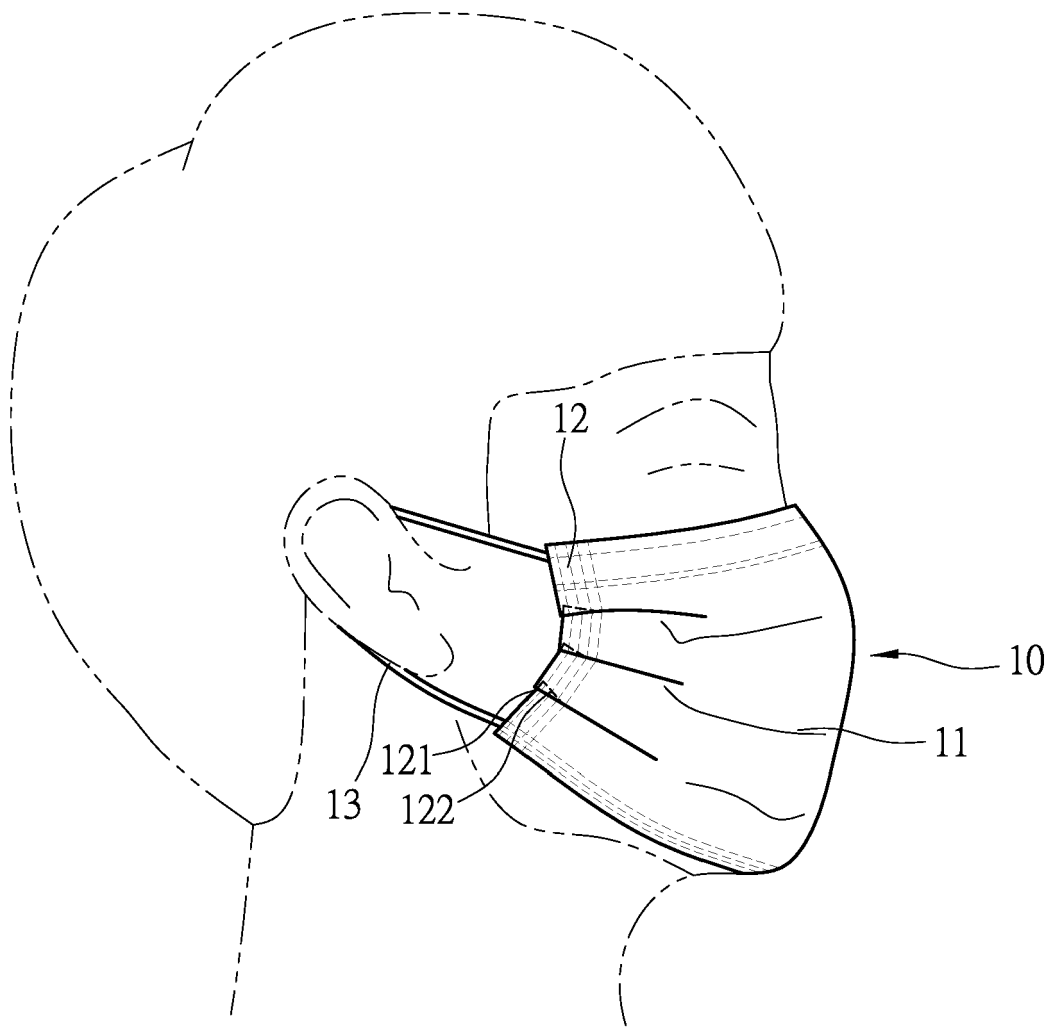


FIG. 4

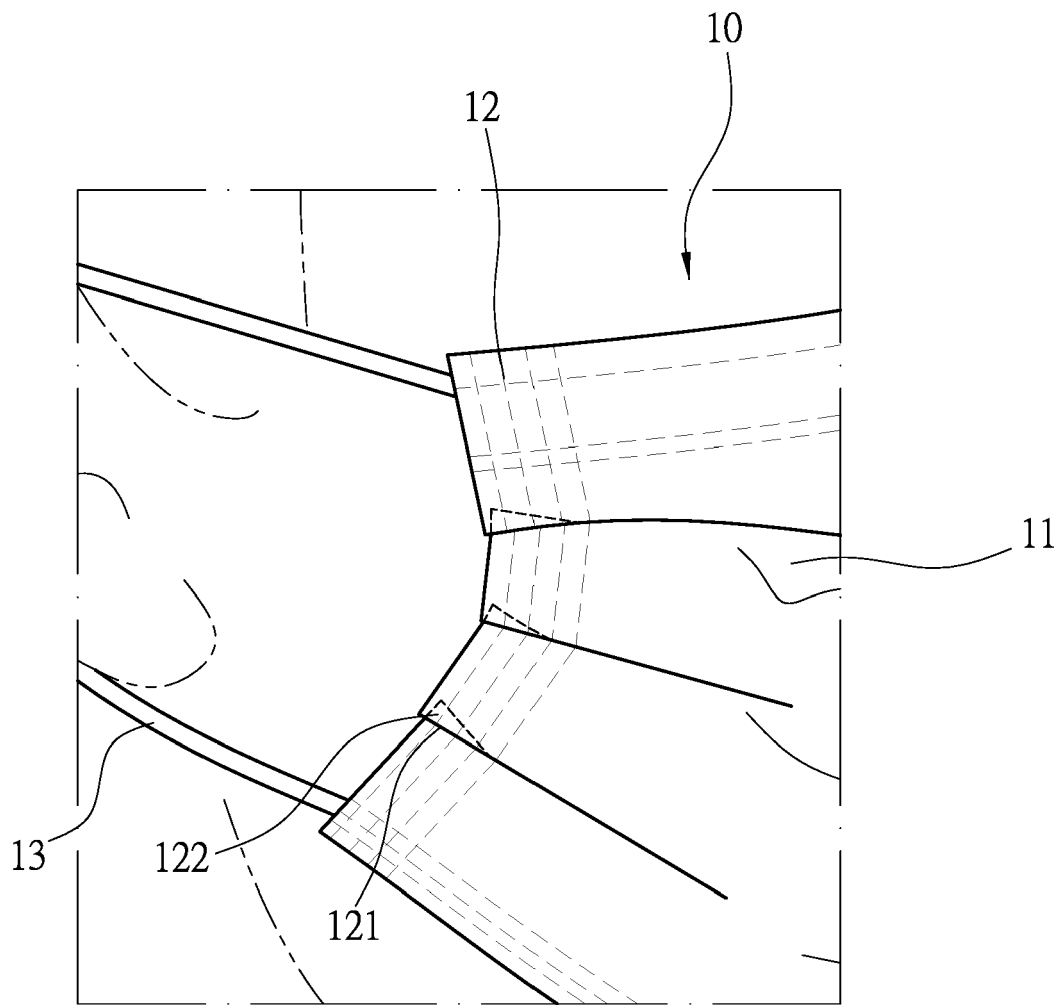


FIG. 5

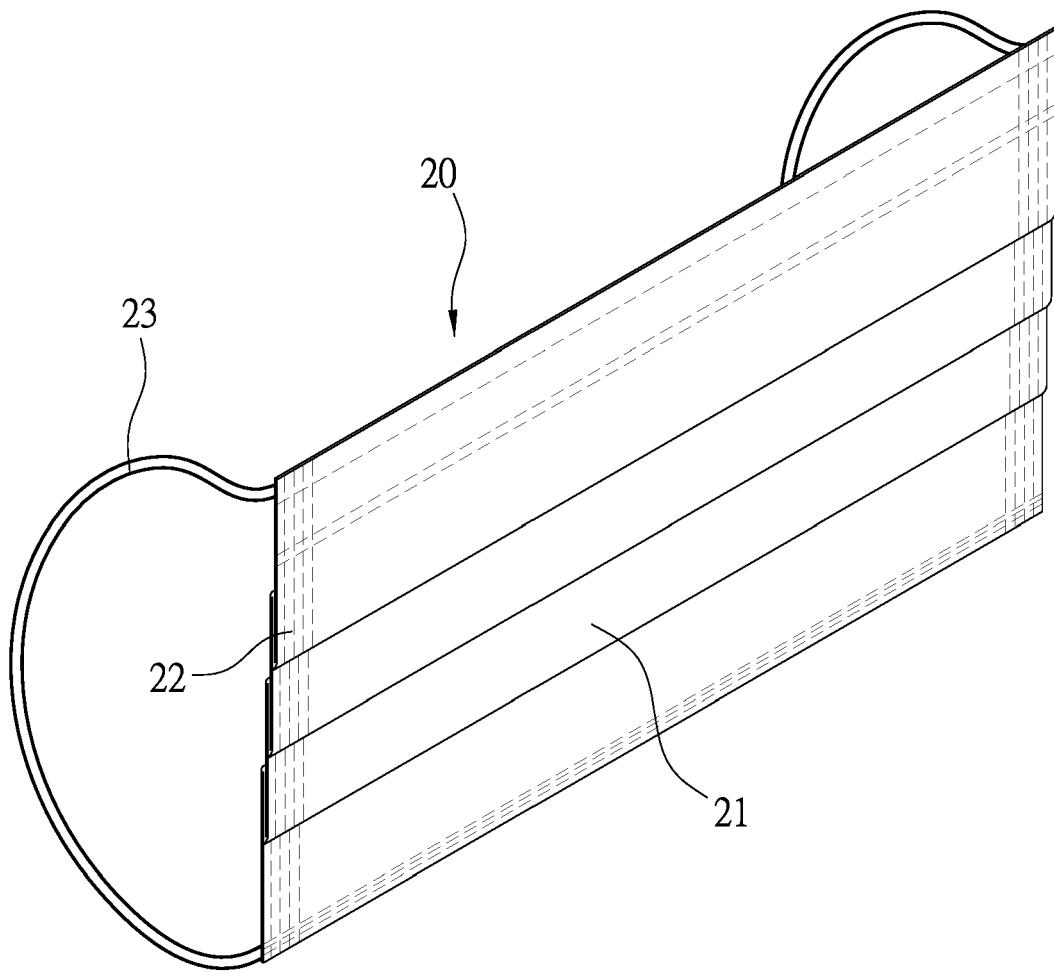


FIG. 6
PRIOR ART

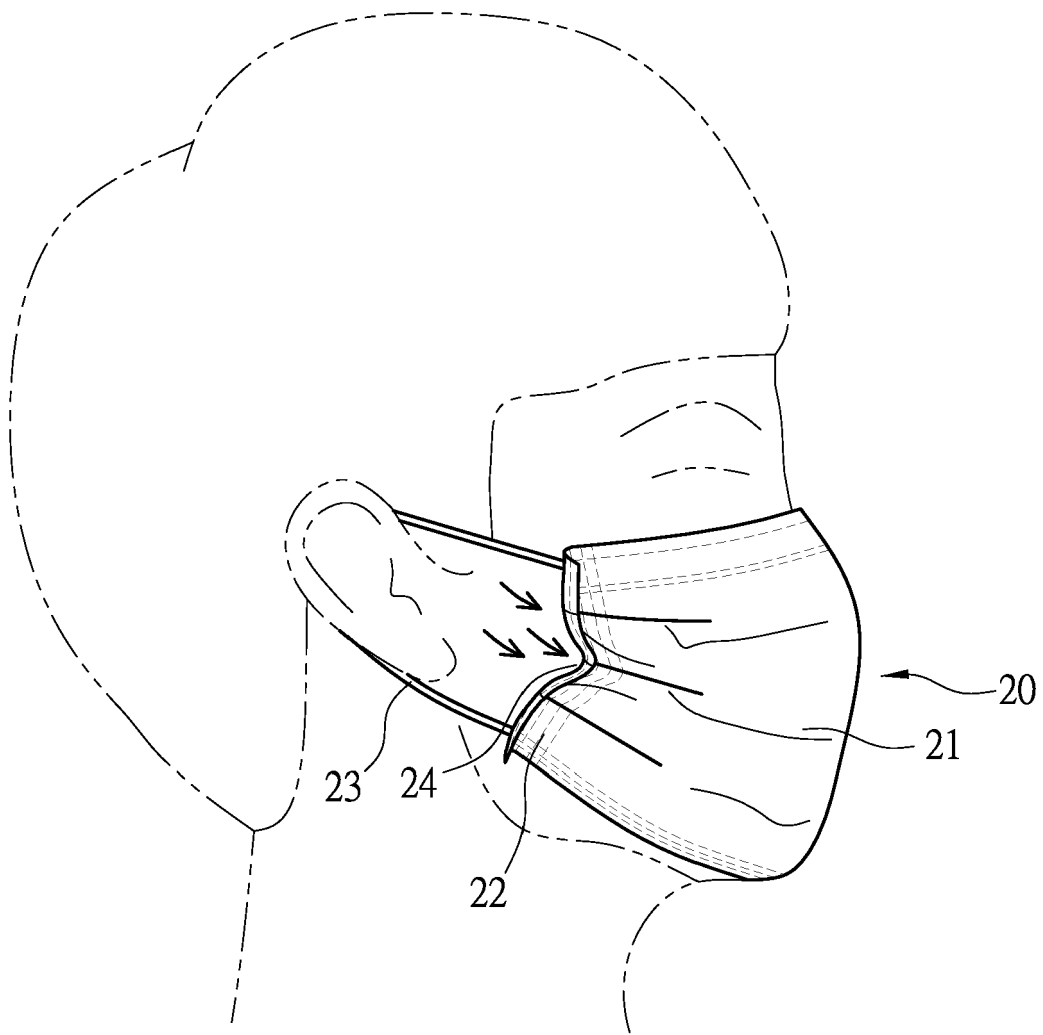


FIG. 7
PRIOR ART

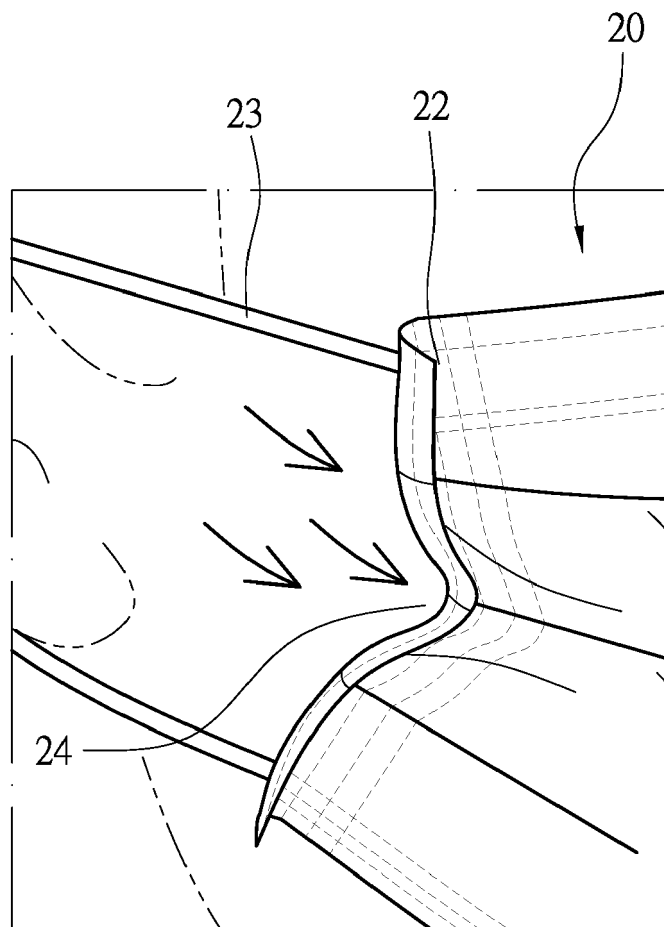


FIG. 8
PRIOR ART



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Application Number
EP 21 02 0021

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X	KR 101 782 477 B1 (GMS GLOBAL CORP [KR]) 23 October 2017 (2017-10-23) * abstract; figures 9, 10 * * paragraphs [0034], [0035], [0040], [0057] - [0060] * -----	1-6	TECHNICAL FIELDS SEARCHED (IPC) A41D A62C A62B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 1 July 2021	Examiner Contreras Aparicio
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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