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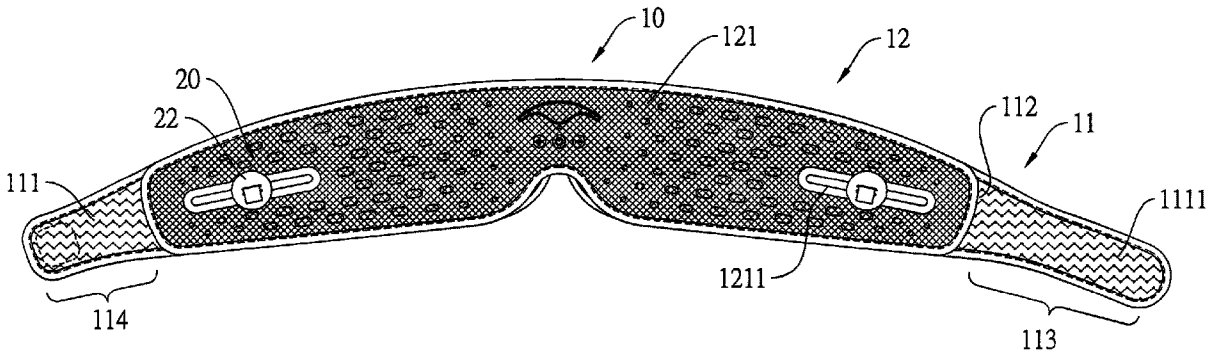
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(54) Title: EYE MASK



(57) Abrégé/Abstract:
An eye mask is provided. The eye mask has a mask main body (10) and two speaker assemblies (20). The mask main body (10) has a first headband (11) and a second headband (12). The first headband (11) is configured to cover a user's eyes and ears. The two speaker assemblies (20) are mounted in the second headband (12), and at least one of the speaker assemblies (20) is capable of moving to correspond to the ears. When wearing the present eye mask, the user may cover eyes first and then connect and tie two ends of the mask main body (10), thereby securing the eye mask on the head. In the meantime, the mask also covers the user's ears. The second headband (12) is detachably mounted on the first headband (11), and the first headband (11) contacts the user and is washable.

ABSTRACT OF THE DISCLOSURE

EYE MASK

An eye mask is provided. The eye mask has a mask main body (10) and two speaker assemblies (20). The mask main body (10) has a first headband (11) and a second headband (12). The first headband (11) is configured to cover a user's eyes and ears. The two speaker assemblies (20) are mounted in the second headband (12), and at least one of the speaker assemblies (20) is capable of moving to correspond to the ears. When wearing the present eye mask, the user may cover eyes first and then connect and tie two ends of the mask main body (10), thereby securing the eye mask on the head. In the meantime, the mask also covers the user's ears. The second headband (12) is detachably mounted on the first headband (11), and the first headband (11) contacts the user and is washable.

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EYE MASK

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present disclosure relates to an article for daily use, especially to an eye mask that shades light.

2. Description of the Prior Arts

An eye mask is a daily necessity for helping people to sleep. If the brightness of the environment is high, it will easily affect the sleep quality and even make many people struggle to fall asleep. Therefore, an eye mask worn during sleep for shading light from the environment becomes an important apparatus to maintain the sleep quality.

Moreover, noise in the environment also bothers people during sleep. Thus, many people like to sleep with music or white noise, which blocks the noise from the environment and provides another way to help them fall asleep. As a result, some eye masks include two speakers to cover the user's ears. Because the structure of the eye mask is fixed but the head size differs from person to person, the speakers may not exactly over the ears. Thus, the environment noise is still capable of entering the user's ears. Accordingly, a need remains for improved sleep masks having speaker and audio functionality.

Besides, an eye mask may have two surfaces, one of the surfaces is configured to contact the user's skin, and the other is configured to shade the light. The surface configured to contact skin may be tender and washable, but the surface configured to shade the light may become fragile during washing or

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form a pattern that will fade after washing. Often, people are thus resistant to washing the eye mask.

However, people often sweat in sleep, so the eye mask that contacts the skin may absorb sweat continuously. After a period of time of use, the user may feel itchy or uncomfortable when wearing the eye mask and then have to wash it.

If the conventional eye mask includes one or more speakers, since the speakers are made of electric components, the eye mask with one or more speakers is generally not washable. If the user cannot tolerate an uncomfortable eye mask, but is resistant or cannot clean it, a new eye mask is needed but this is expensive. Accordingly, a need remains for improved sleep masks having speakers.

To overcome the shortcomings, the present invention provides an eye mask to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

The main objective of the present invention is to provide an eye mask with one or more movable speakers configured for noise blocking, and the eye mask includes multi-piece so that some pieces are washable.

The eye mask has a mask main body and at least one speaker assembly. The mask main body is configured to cover a user's eyes and ears. The mask main body includes at least one inner space. The at least one inner space corresponds to the user's ears in location. The at least one speaker assembly is mounted in the at least one inner space and configured to be adjustable and movable in the at least one inner space.

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With the aforementioned structures, the eye mask of the present disclosure is capable of not only shading light but also substantially reducing or blocking noise. When wearing the present eye mask, the user may cover the eyes and connect and tie two ends of the second headband, thereby securing the eye mask on the head. The eye mask also substantially covers the user's ears. Then, the two speaker assemblies may be moved or adjusted along the two slots of the first headband so that the two speaker assemblies can align with the user's ears respectively. As a result, when the user desires some assistance to fall asleep, the two speaker assemblies can provide a desired sound, music, or white noise to the user's ears, which can reduce or substantially blocks surrounding or environment noise and thus helps the user to sleep.

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

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a front view of an eye mask in accordance with the present disclosure;

Fig. 2 is a rear view of the eye mask of Fig. 1;

Fig. 3 is a top view of the eye mask of Fig. 1;

Fig. 4 is a front view of a first headband of the eye mask of Fig. 1;

Fig. 5 is a rear view of the first headband of the eye mask of Fig. 4;

Fig. 6 is a front view of a second headband of the eye mask of Fig. 1;

Fig. 7 is a rear view of the second headband of the eye mask of Fig. 6;

Fig. 8 is an exploded view of a first headband of the eye mask in Fig. 1;

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Fig. 9 is a sectional view of an inner space and a speaker assembly of the eye mask in Fig. 1;

Fig. 10 is an enlarged view of a slot and a speaker assembly of the eye mask in Fig. 1;

Fig. 11 is an enlarged view of a slot of the eye mask in another configuration of the present disclosure;

Fig. 12 is an enlarged view of a slot of the eye mask in another configuration of the present disclosure;

Fig. 13 is a front view of an eye cup of the eye mask of Fig. 1;

Fig. 14 is a rear view of the eye cup of the eye mask of Fig. 13;

Fig. 15 is an enlarged view of a speaker assemblies of the eye mask in Fig. 8;

Fig. 16 is a perspective view of an eye mask in accordance with another embodiment of the present disclosure; and

Fig. 17 is an exploded view of the eye mask of Fig. 16.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please refer to Fig. 1 to Fig. 3. An eye mask is provided in accordance with the present disclosure includes a mask main body 10 and two speaker assemblies 20.

The mask main body 10 is configured to cover a user's eyes and ears and thereby shades light and noise. The mask main body 10 may only include one headband, such that said headband in use is configured to cover the user's eyes and ears and receive the two speaker assemblies 20. The mask main body 10 may

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include two headbands configured to compliment and engage with each other via a reusable adhesive.

In this example, the mask main body 10 includes a first headband 11 and a second headband 12. The first headband 11 is configured to contact the user, and the second headband 12 is configured to receive the two speaker assemblies 20. In this embodiment, the mask main body 10 further includes two eye cups 13.

The first headband 11 can be made of fabric, so the first headband 11 is comfortable and breathable and is capable of absorbing sweat. Moreover, the first headband 11 is configured to be washable. According to the present disclosure, being washable means that the first headband 11 will generally stay intact under standard washing conditions which may include being washed in a laundry machine or being hand washed. In this example, the first headband 11 does not include any electronic components which could be damaged or destroyed if exposed to excessive water or normal washing/laundry conditions. Moreover, the first headband 11 can include an internal foam material covered by fabric to provide added comfort. The internal foam material should also be configured to be washable.

Please refer to Figs. 3 to 5. The first headband 11 defines a front surface 111 and a rear surface 112, a first end 113 and an opposite second end 114, and a middle section 115 between the first end 113 and the second end 114. The front surface 111 and the rear surface 112 are opposite each other. The rear surface 112 is configured to cover a user's eyes and ears. The first end 113 and the second end 114 are opposite two ends of the first headband 11. The first

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headband 11 can be curved and the middle section 115 can be configured to be higher than the first end 113 and the second end 114 when worn by the user, and thereby the user may have better wearing experience. In this embodiment, the first end 113 is longer than the second end 114.

In an example, a length of the first headband 11 is larger than the circumference of the user's head, such that when the two ends of the first headband 11 are secured on each other and the first headband 11 forms a loop. The first headband 11 includes an end fluff layer 1111, a front fluff layer 1112, and a rear fluff layer 1121. The end fluff layer 1111 is formed on the front surface 111 of the first end 113. The front fluff layer 1112 is formed on the front surface 111 of the middle section 115. The end fluff layer 1111 and the front fluff layer 1112 may be connected to each other and formed integrally. The rear fluff layer 1121 is formed on the rear surface 112 of the middle section 115. In this example, the rear fluff layer 1121 extends only a portion of the rear surface 112 and corresponds to an area designed to cover the eyes of a user or to host eye cups 13. The eye cups 13 can also include a fastener feature to detachably attach to the first headband 11.

The first headband 11 includes an attach pad 1122. The attach pad 1122 is provided on the rear surface 112 of the second end 114. The attach pad 1122 is configured to detachably connect to the end fluff layer 1111, such that the second end 114 is secured on the first end 113, thereby the first headband 11 forming the loop. Thus, a user's head may be enveloped in the first headband 11 and secured in place for using during sleep and centering the eye cups 13 or the middle section 115 substantially around the eyes of the user. Attach pad 1122

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can include an adhesive surface for detachably securing the second end 114. An adhesive surface may include a fastener like a hook-and-loop fastener, commonly referred to as VELCRO. Each end can be include a corresponding fastener strip that can be attached via any attachment means like glue, sowing, or otherwise.

Please refer to Figs. 6 to 10. The second headband 12 is configured to be detachably mount on the first headband 11 and configured to contact a user's skin. A length of the second headband 12 is larger than a length from an ear to another ear along a circumference of the user's head. The two speaker assemblies 20 are provided and secured in the second headband 12 and correspond to the user's ears in location. Typically, the second headband 12 is not washable since it contains electronic components (e.g., the speaker assemblies 20).

The detachability allows for customized positioning which adds to the comfort and individualization of each headband. Therefore, the first headband 11 is located between the eye cups 13 and the second headband 12.

The second headband 12 includes a front surface 121 and a rear surface 122. The rear surface 122 of the second headband 12 faces the user and includes an attaching portion 1221. The attaching portion 1221 is provided on the rear surface 122 of the second headband 12 and configured to detachably attach onto the front fluff layer 1112 of the first headband 11, such that the second headband 12 is detachably secured on the first headband 11. The attaching portion 1221 may be composed of at least one attaching strip, and the attaching strip is provided on the second headband 12 and extends along a contour of the second headband 12. The attachment portion may include an adhesive surface like a

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fastener like a hook-and-loop fastener, commonly referred to as VELCRO. Each end can include a corresponding fastener strip that can be attached via any attachment means like glue, sowing, or otherwise.

In this example, the second headband 12 defines at least two inner spaces 120 positioned opposite from each other and at least one slot 1211. Precisely, the second headband 12 includes a first sheet and a second sheet, and at least two inner spaces 113 formed between the first sheet and the second sheet. The two inner spaces 120 correspond to the user's ears in location and each forms a pocket or a cavity for receiving an inner space 120. Each one of the at least one slot 1211 is formed to allow access to at least one of the inner spaces 120. In this embodiment, the second headband 12 defines two slots 1211 and each slot 1211 communicates with a respective one of the corresponding inner spaces 120. Each slot 1211 can be formed to extend horizontally along a horizontal axis generally defined by the eye mask when fully extended. This defines a length of the slot 1211 and a width W1 is defined perpendicular to the axis of the length of the slot 1211. The width W1 of each slot 1211 is sized and shaped to be smaller than a width defined by the corresponding inner space 120.

In present configuration shown in Fig. 10, each one of the slots 114 is straight, but it is not limited thereto. As shown in Fig. 11, the slot 1211A may be curved, and as shown in Fig. 12, the slot 1211B may be undulating or wavy, such that the speaker assemblies 20 can be adjust and moved along the slot 1211A or slot 1211B in two directions.

Please refer to Figs. 2, 13, and 14. The two eye cups 13 are configured to fit contours of eye sockets and cover the user's eyes, and thereby the eye cups

13 shade light thoroughly and provide better wearing experience. Eye cups 13 include a comfort pad that substantially surrounds an eye socket and defines an open pocket that provides space for a user's eye. This pocket configuration makes blinking and resting more comfortable as the surface of the eye cup generally avoids direct contact with the user's eyelid and/or eyelashes.

The two eye cups 13 can be detachably mounted on the first headband 11 and configured to cover the user's eyes respectively. Each one of the eye cups 13 has a front side 131 and a rear side 132 opposite each other. The rear side 132 is configured to cover one of the user's eyes. Each one of the eye cups 13 comprises an attaching portion 130. The attaching portion 130 of the eye cup 13 is mounted on the front side 131 of the eye cup 13 and configured to detachably attach onto the rear fluff layer 1121 of the first headband 11, such that the eye cup 13 is secured on the first headband 11. The eye cups 13 can be made of fabric, so the eye cups 13 are configured to be comfortable and breathable and are suitable for absorbing at least some of the user's sweat. Moreover, the eye cups 13 can be configured to be washable.

In another embodiment, the eye mask may not have eye cups 13, so the user's eyes are shaded by the first headband 11.

Please refer to Figs. 8 to 10 and 15. The two speaker assemblies 20 are provided in the inner spaces 120 respectively. At least one of the speaker assemblies 20 is configured to be manually moved or adjusted within the corresponding inner space 120. In an example, one of the speaker assemblies 20 is adjustable in location, but the other one may not.

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In an example, in use, the user may adjust the entire eye mask so that the inner space 120 that cannot be adjusted and aligned with one ear, and then adjust the movable inner space 120 with respect to the entire eye mask to align with the other ear. In another embodiment, the two speaker assemblies 20 are movable and adjustable within the corresponding inner spaces 120.

In a further example, the speaker assemblies 20 each includes a speaker 21 and an operation unit 22. The speaker 21 is configured to be loose or floating within the pocket formed by inner space 120 and movably positioned within one of the inner spaces 120 of the mask main body 10. A general size of the speaker 21 is larger than that of the at least one slot 1211, such that the speaker 21 may not easily be moved from or unintentionally fall out of the inner space 120. Precisely, a width W2 of the speaker 21 is larger than the width W1 of the at least one of the slot 1211.

The operation unit 22 is located out of the mask main body 10 and connected to the speaker 21 via the at least one slot 1211, which allows the user to manually adjust or manipulate the operation unit 22 to slide or move the connected speaker 21. In this embodiment, the operation unit 22 includes a tab 221 and selectively has a positioning piece 222. The tab 221 has two ends. One of the ends of the tab 221 is connected to the speaker 21 and the other end extends out from the slot 1211. The positioning piece 222 is mounted on the tab 221 and located between the two ends of the tab 221. A width W3 of the positioning piece 222 is larger than the width W1 of the at least one of the slot 1211.

The speaker assemblies 20 can be configured to be coupled to a hidden control unit 30 having multiple button 31, e.g. a power-on button, a connect

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button, and a volume control buttons. The speaker assemblies 20 can be coupled to the control unit 30 which is coupled to a power supply like a battery in the control unit 30. In this example, the power supply is a rechargeable battery that further includes an effectively concealed charging port 32. The speaker assemblies 20 are further coupled to the control unit 30 through hidden wires concealed within the second headband 12. It is further noted that the control unit 30 hidden wire and/or the speaker assemblies 20 are wirelessly accessible to allow the playing of sound or music from a wireless source like a music or noise app of a smartphone, tablet or otherwise. A wireless communication protocol or module can be incorporated into the control unit 30 to allow for BLUETOOTH compatibility or otherwise

Please refer to Fig. 16 and Fig. 17. The eye mask in accordance with another embodiment of the present disclosure is provided. In this embodiment, the first headband 11C is a loop such that the first headband 11C may be secured on the user's head without any attach pad, which makes the entire first headband 11C tender and provides the user better experience. The loop-shaped first headband 11C is washable and breathable and is capable of absorbing sweat. Besides, the entire first headband 11C may be made of elastic material, an elastic ribbon for example, or only a section of the first headband 11C is made of elastic material. The eye mask may still has a second headband 12 detachably mounted on the first headband 11C and two speaker assemblies 20 mounted in the second headband 12. When wearing the eye mask, the user can envelope head in the first headband 11C arbitrarily, and then attach the second headband 12 on the first headband 11C according to the position of eyes and ears. Or, the user's head can

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be enveloped by both the first headband 11C and the second headband 12, and then adjust the first headband 11C until the second headband 12 aligning the position of eyes and ears.

With the aforementioned structures, the eye mask of the present disclosure is capable of not only shading light but also substantially reducing or blocking noise. When wearing the present eye mask, the user may cover the eyes and connect and tie two ends of the first headband 11, thereby securing the eye mask on the head. The eye mask also substantially covers the user's ears. Then, the two speaker assemblies 20 may be moved or adjusted along the two slots 1211 of the second headband 12 so that the two speaker assemblies 20 can align with the user's ears respectively. As a result, when the user desires some assistance to fall asleep, the two speaker assemblies 20 can provide a desired sound, music, or white noise to the user's ears, which can reduce or substantially blocks surrounding or environment noise and thus helps the user to sleep.

Besides, since the eye mask of the present disclosure includes a first headband 11 and the eye cups 13, and the first headband 11 and the eye cups 13 are configured to contact the user. Therefore, after putting on the present eye mask, the user may separate the first headband 11, the second headband 12, and the eye cups 13, and then only wash the first headband 11 and the eye cups 13 that are no longer clean or have absorbed the user's sweat. As a result, with the eye mask of the present disclosure, the user can wash the dirty part of the eye mask but still keep the speaker assemblies 20 intact.

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WHAT IS CLAIMED IS:

1. An eye mask characterized in that the eye mask comprises:

a mask main body configured to cover a user's eyes and ears; the mask main body including:

at least one inner space corresponding to the user's ears in location;

at least one speaker assembly mounted in the at least one inner space and configured to be adjustable and movable in the at least one inner space.

2. The eye mask as claimed in claim 1, wherein:

the mask main body further includes:

at least one slot formed to allow access to the at least one inner space; and

each one of the at least one of the speaker assembly includes:

a speaker movably positioned in the at least one inner spaces of the mask main body; and

an operation unit located out of the mask main body and connected to the speaker via the at least one slot.

3. The eye mask as claimed in claim 2, wherein:

a width of the at least one slot is smaller than that of the at least one inner space; and

a width of the speaker is larger than that of the at least one slot.

4. The eye mask as claimed in claim 3, wherein the operation unit includes:

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a tab having two ends, one of the ends mounted on the speaker and the other end extending out of the slot.

5. The eye mask as claimed in claim 3, wherein:

the operation unit includes:

a tab having two ends, one of the ends mounted on the speaker and the other end extending out of the slot; and

a positioning piece mounted on the tab and located between the two ends of the tab, and a width of the positioning piece being larger than that of the at least one slot.

6. The eye mask as claimed in claim 1, wherein the at least one speaker assembly includes two said speaker assemblies, the two speaker assemblies are capable of moving in the at least one inner space.

7. The eye mask as claimed in claim 6, wherein:

the mask main body includes:

two slots formed to allow access to the at least one inner space; and

each one of the speaker assemblies includes:

a speaker movably positioned in the inner space inner space of the mask main body; and

an operation unit located out of the mask main body and connected to the speaker via one of the slot.

8. The eye mask as claimed in any one of claims 2 to 7, wherein each one of the at least one slot is straight, curved, or undulating.

9. The eye mask as claimed in any one of claims 1 to 8 further comprising:

a control unit mounted in the mask main body and connected to the at least one speaker assembly, the control unit including multiple button.

10. The eye mask as claimed in any one of claims 1 to 8, wherein the mask main body includes:

a first headband configured to contact the user;

a second headband detachably mounted on the first headband, the at least one inner space is formed in the second headband.

11. The eye mask as claimed in claim 10, wherein:

the mask main body includes:

two eye cups mounted on the first headband and configured to cover the user's eyes respectively;

the first headband has a front surface and a rear surface opposite each other, and the rear surface faces the user; the first headband comprises:

a fluff layer formed on the rear surface;

each one of the eye cups has a front side and a rear side, the rear side is configured to cover one of the use's eyes; each one of the eye cups comprises:

an attaching portion mounted on the front side of the eye cup and configured to detachably attach onto the fluff layer, such that the eye cup is detachably secured on the first headband.

12. The eye mask as claimed in claim 10, wherein the first headband has a first end, a second end, and a middle section, the first end and the second end are opposite two ends of the first headband, the middle section is between the

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first end and the second end, and the middle section is higher than the first end and the second end in location.

13. The eye mask as claimed in claim 10, wherein:

the first headband has a first end and a second end, the first end and the second end are opposite two ends of the first headband, the first end has a front surface, the second end has a rear surface, the front surface of the first end and the rear surface of the second end face inverse directions;

a fluff layer is formed on the front surface of the first end; and

an attach pad is mounted on the rear surface of the second end and configured to detachably attach onto the fluff layer, such that the second end is detachably secured on the first end.

14. The eye mask as claimed in claim 10, wherein:

the first headband has a front surface and a rear surface opposite each other, and the rear surface faces the user; the first headband comprises:

a fluff layer formed on the front surface;

the second headband has a rear surface facing the user and comprises:

an attaching portion mounted on the rear surface of the second headband and configured to detachably attach onto the fluff layer, such that the second headband is detachably secured on the first headband.

15. The eye mask as claimed in claim 10, wherein the first headband is a strip or a closed loop.

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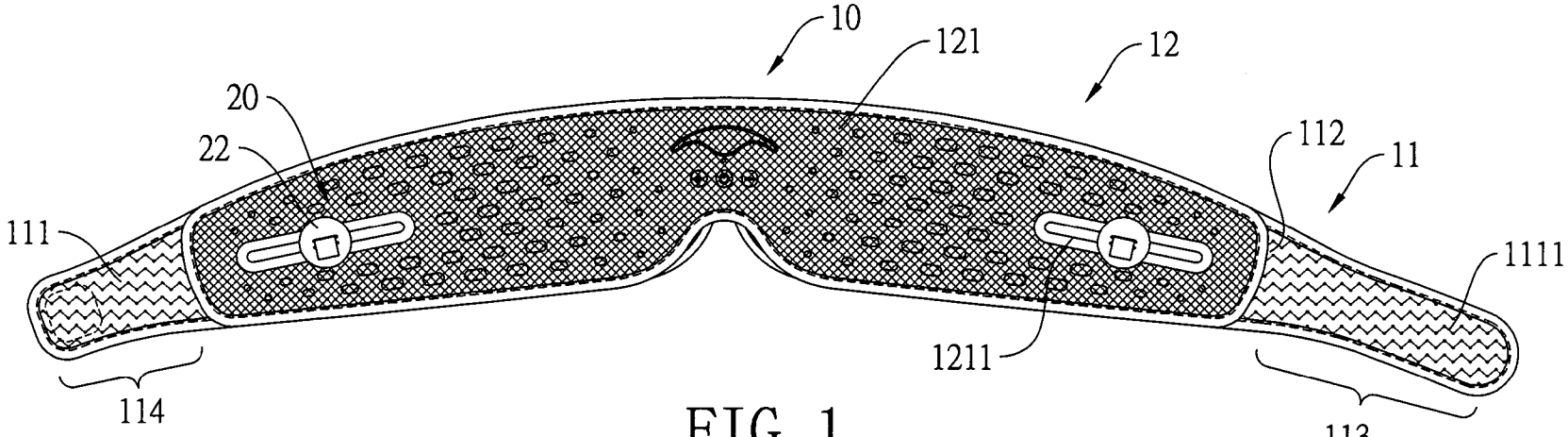


FIG. 1

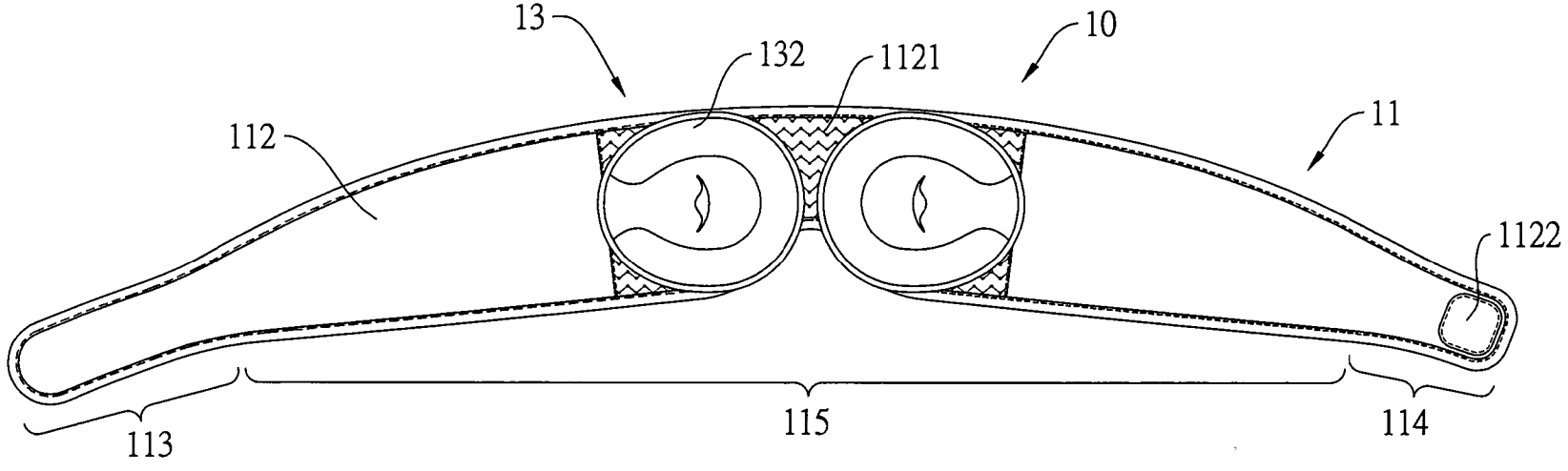


FIG. 2

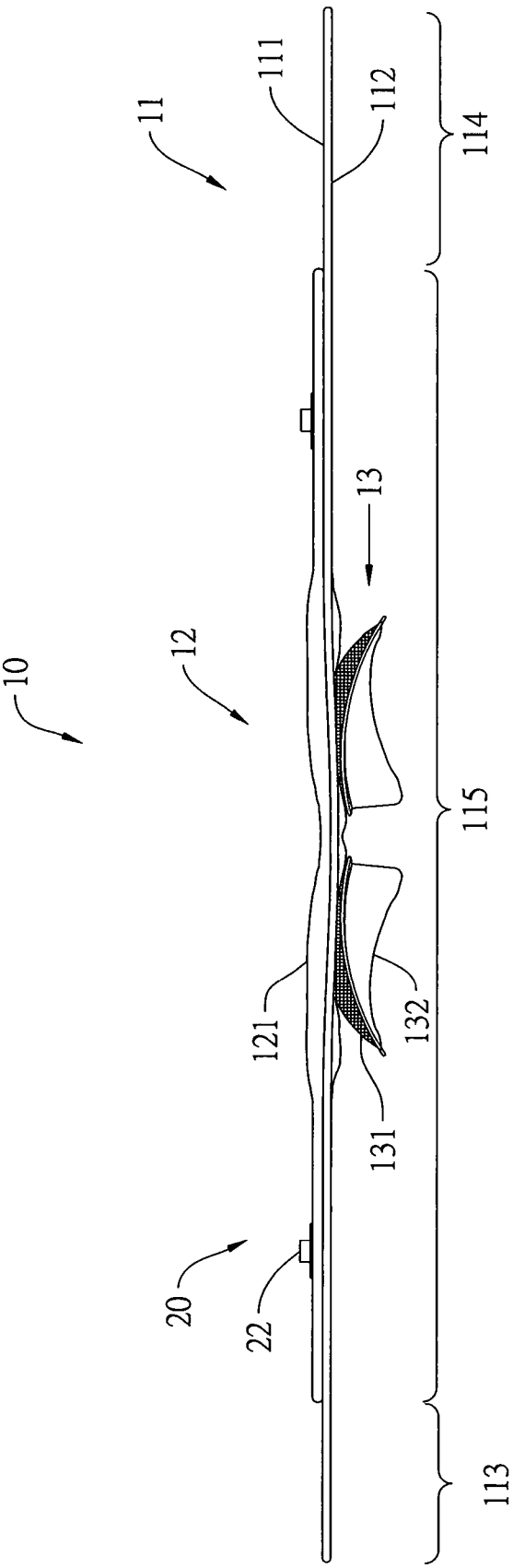


FIG. 3

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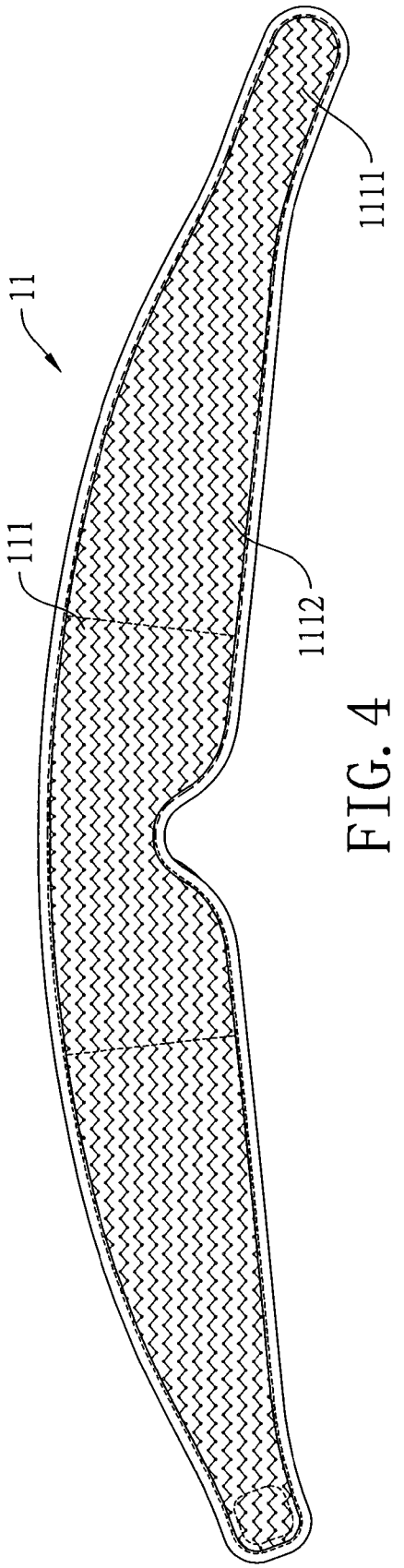


FIG. 4

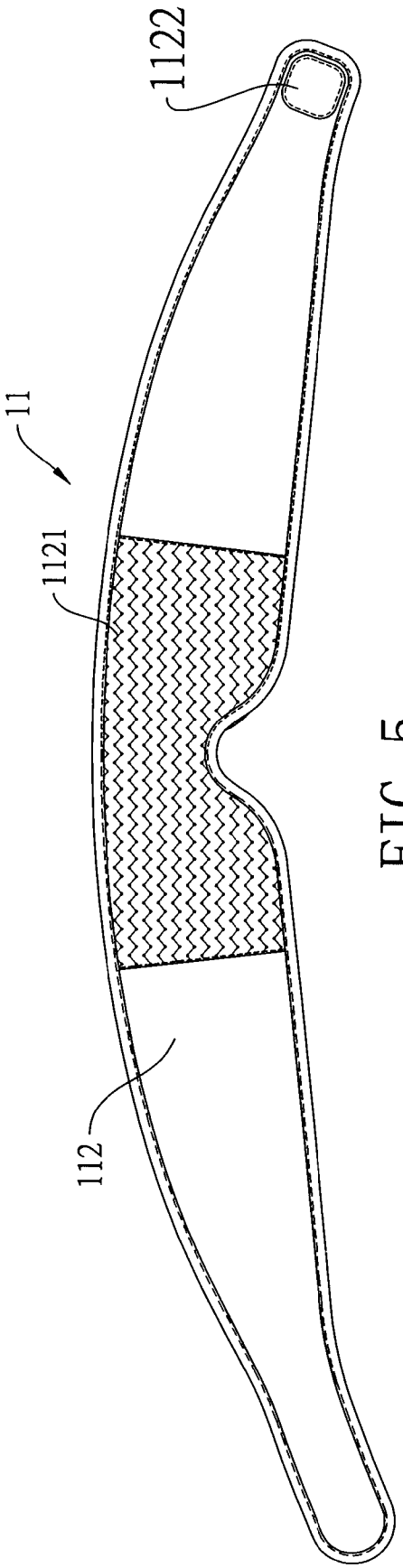


FIG. 5

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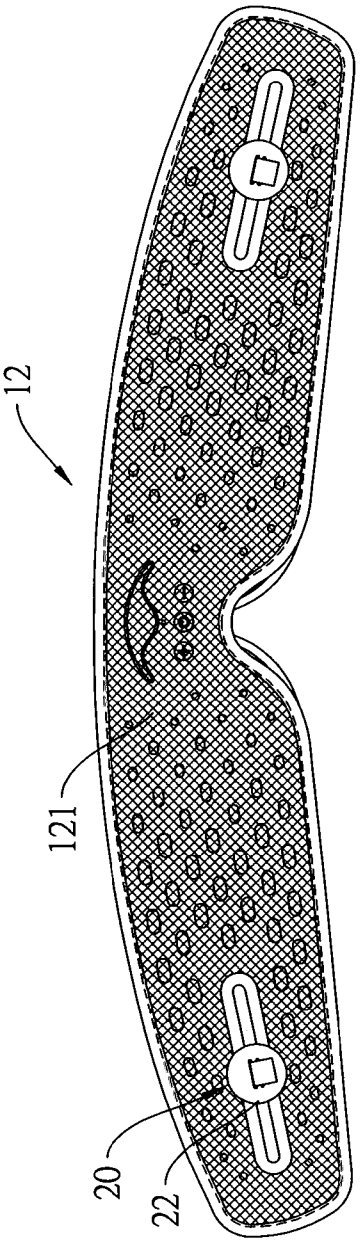


FIG. 6

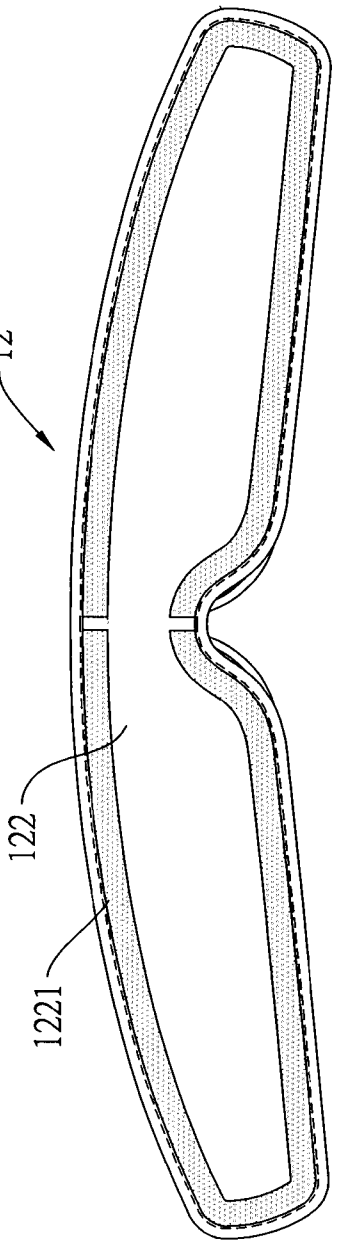


FIG. 7

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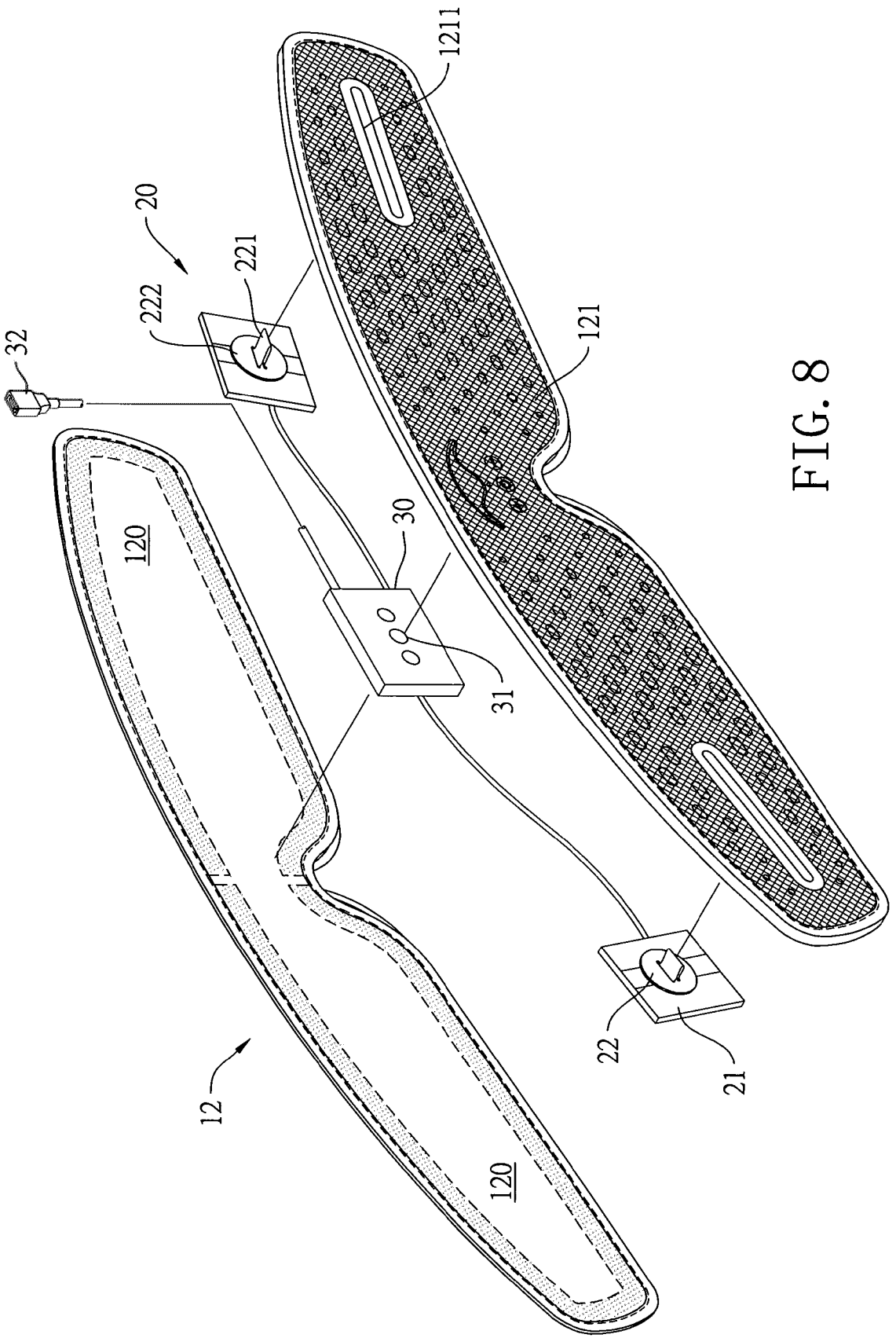


FIG. 8

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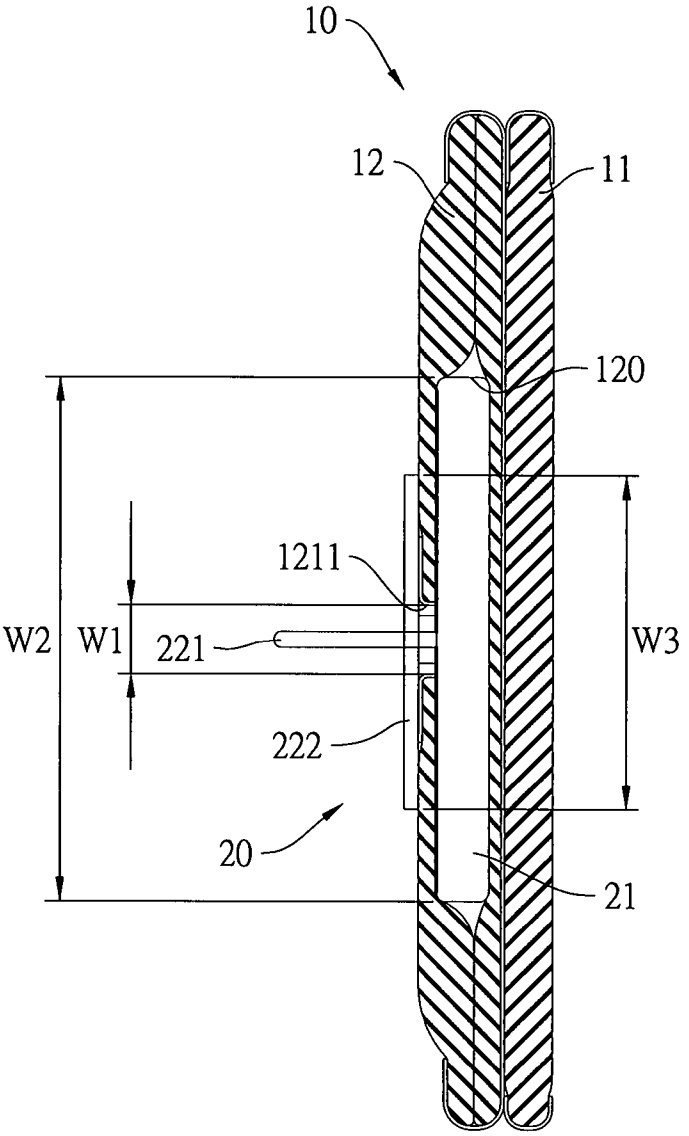


FIG. 9

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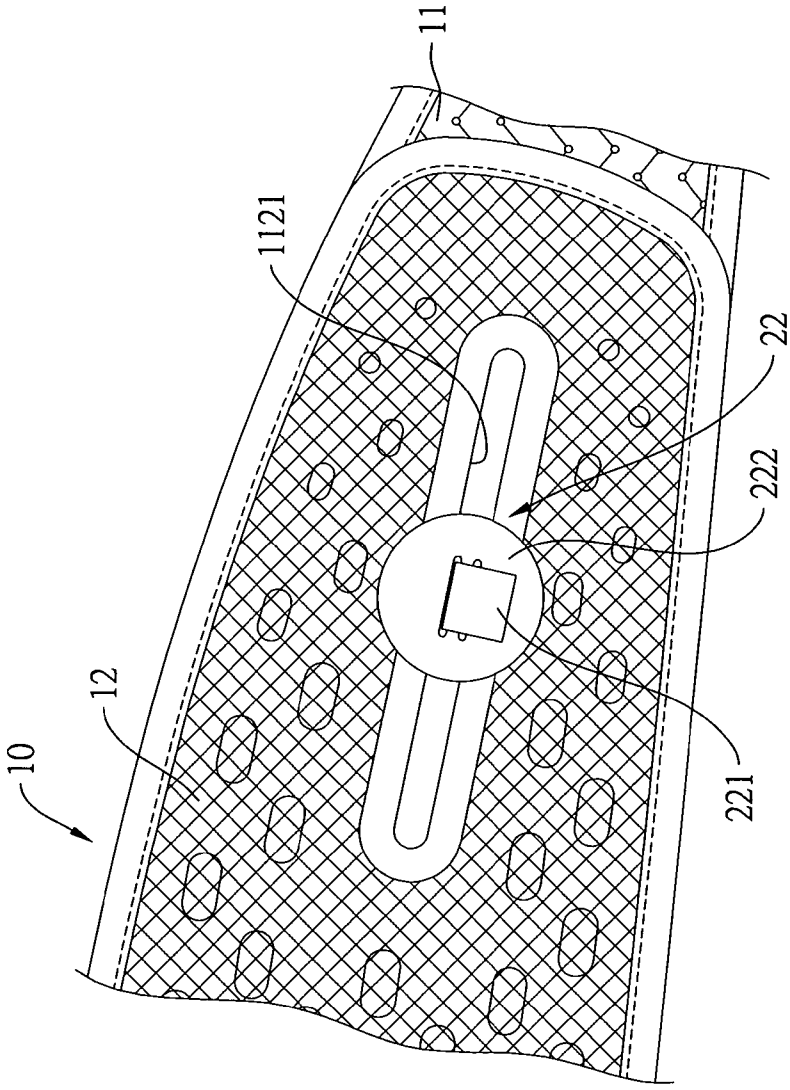


FIG. 10

Date Reçue/Date Received 2023-07-20

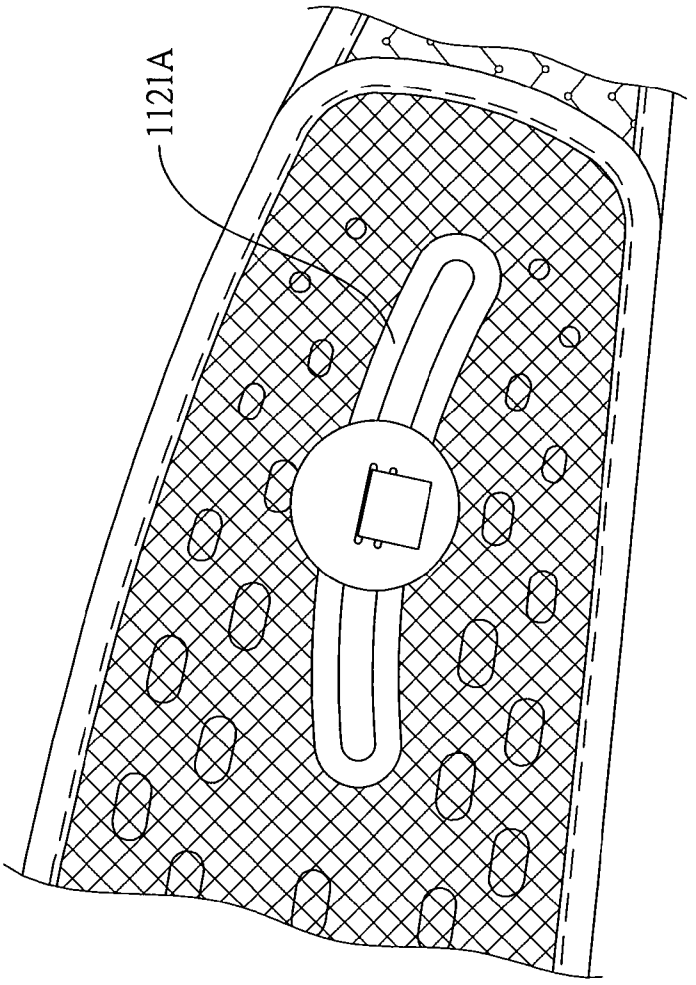


FIG. 11

Date Reçue/Date Received 2023-07-20

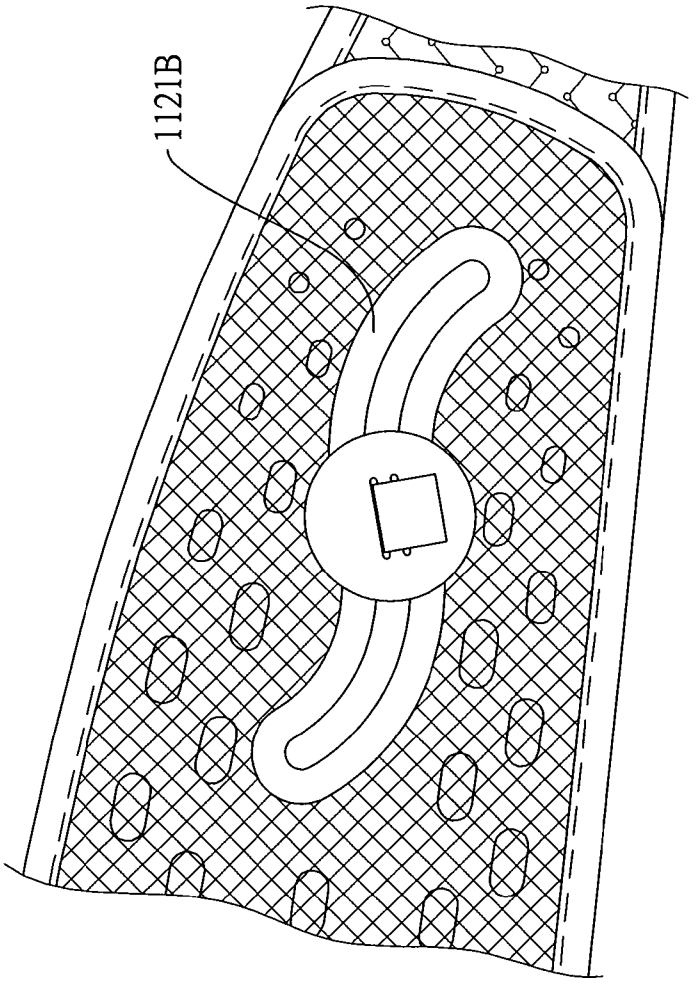


FIG. 12

Date Reçue/Date Received 2023-07-20

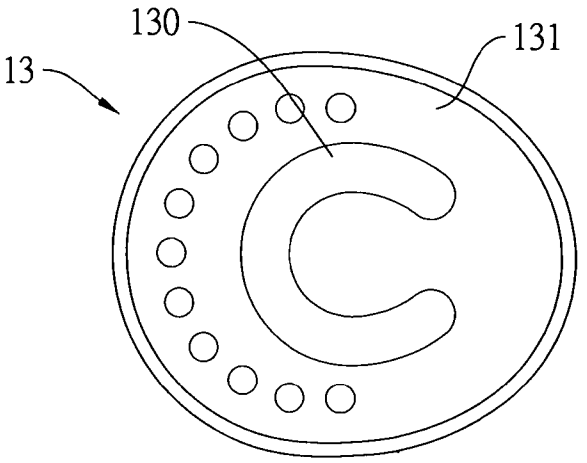


FIG. 13

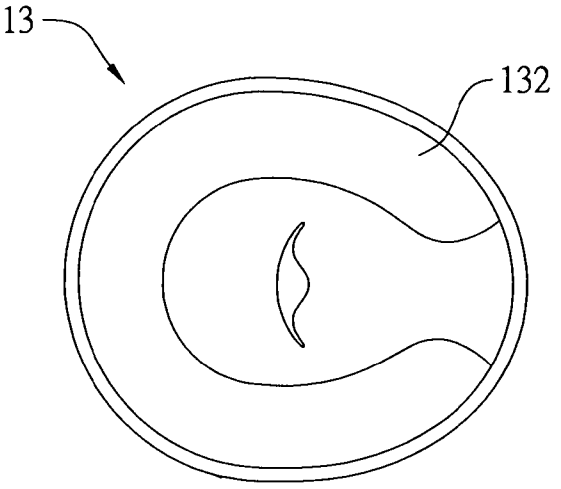


FIG. 14

Date Reçue/Date Received 2023-07-20

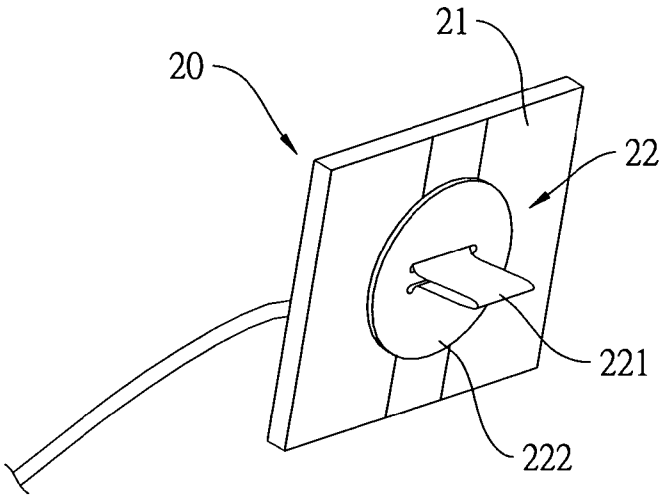


FIG. 15

Date Reçue/Date Received 2023-07-20

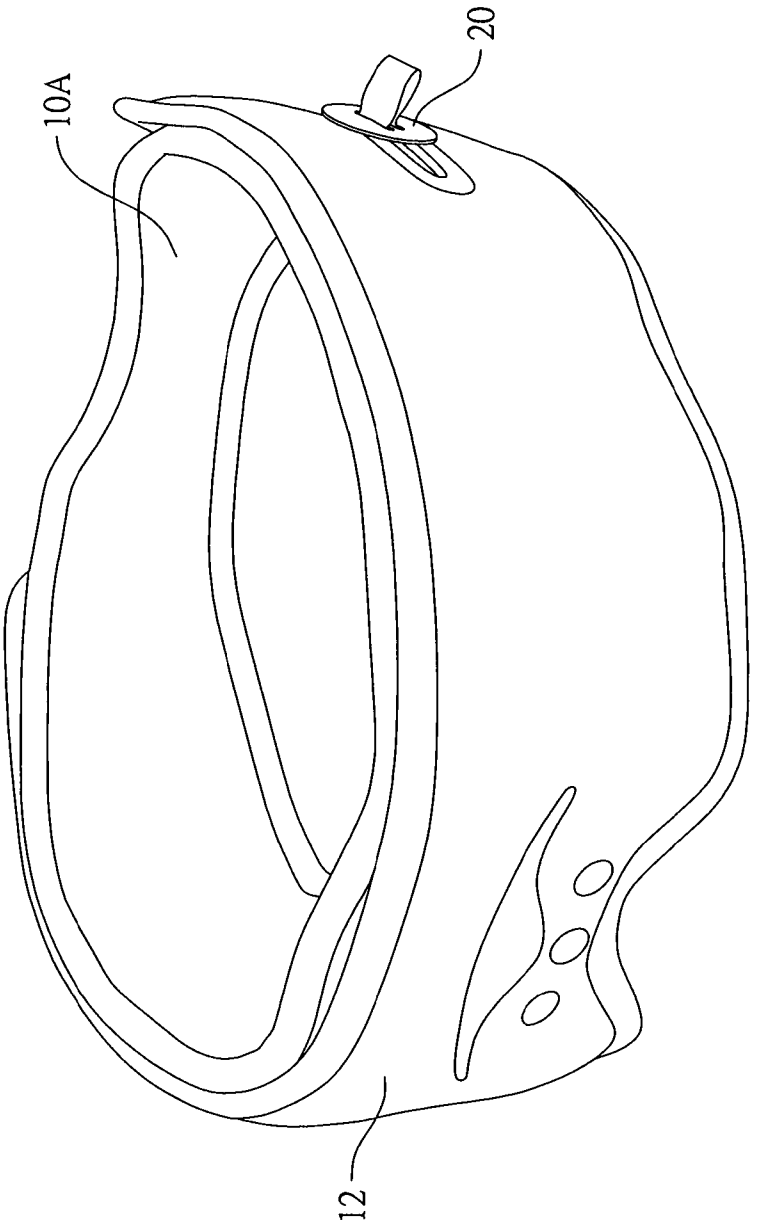


FIG. 16

Date Reçue/Date Received 2023-07-20

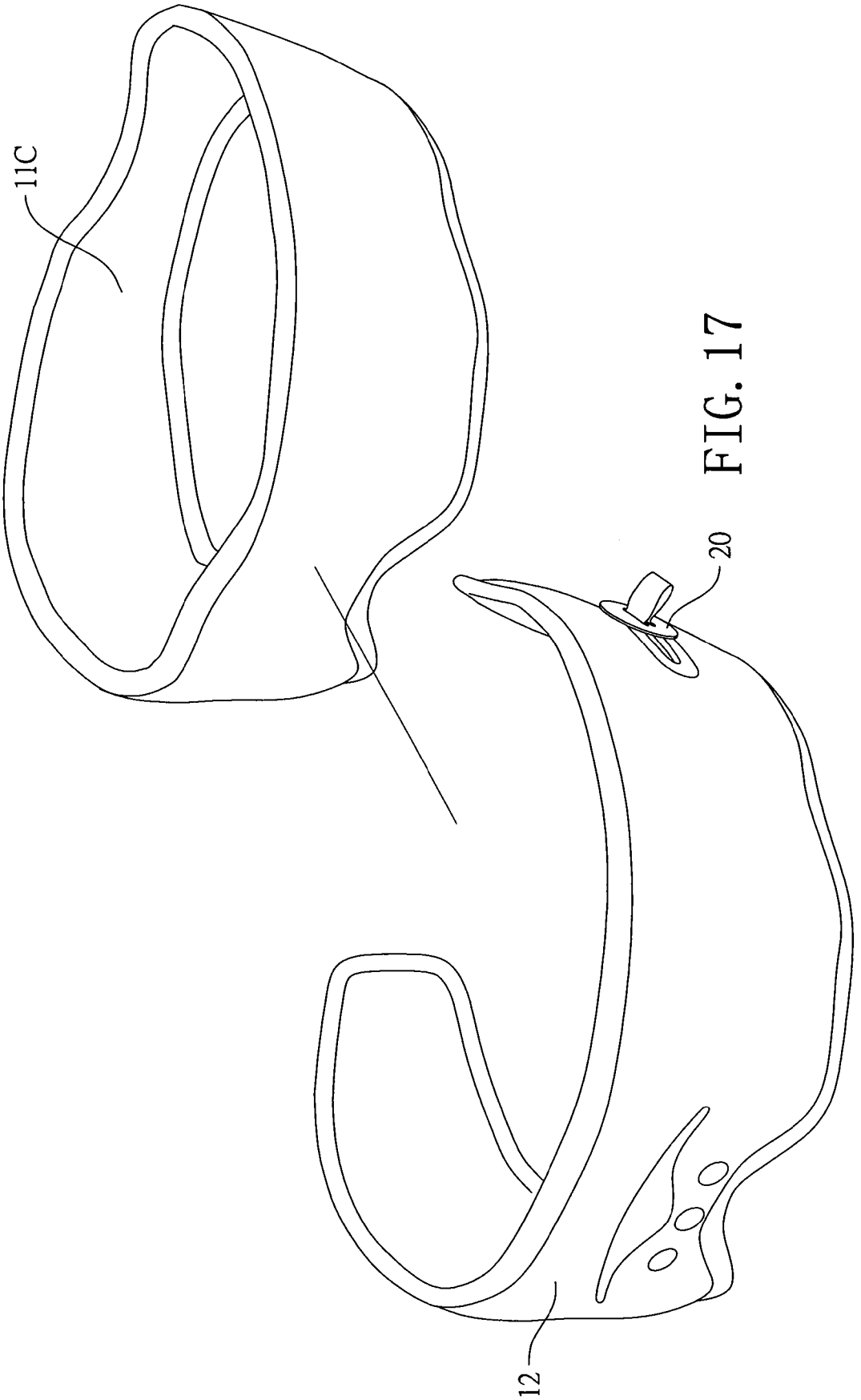
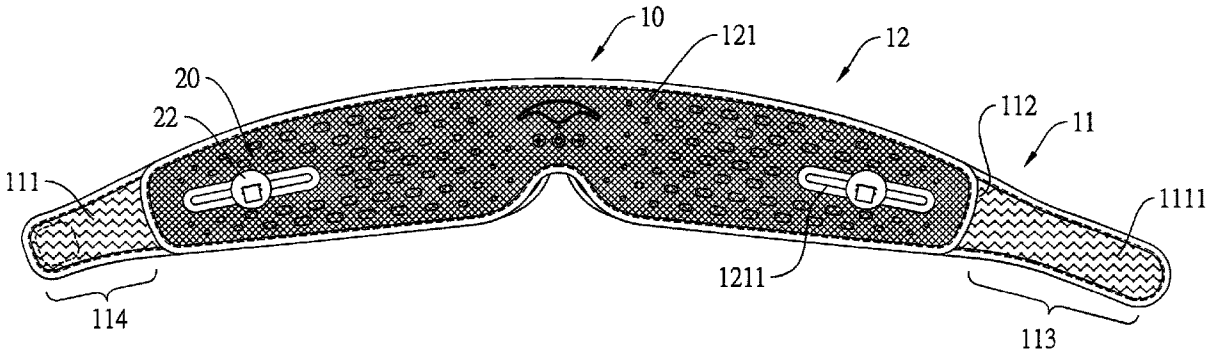


FIG. 17

Date Reçue/Date Received 2023-07-20


10
121
12
20
22
112
11
111
1111
1211
114
113