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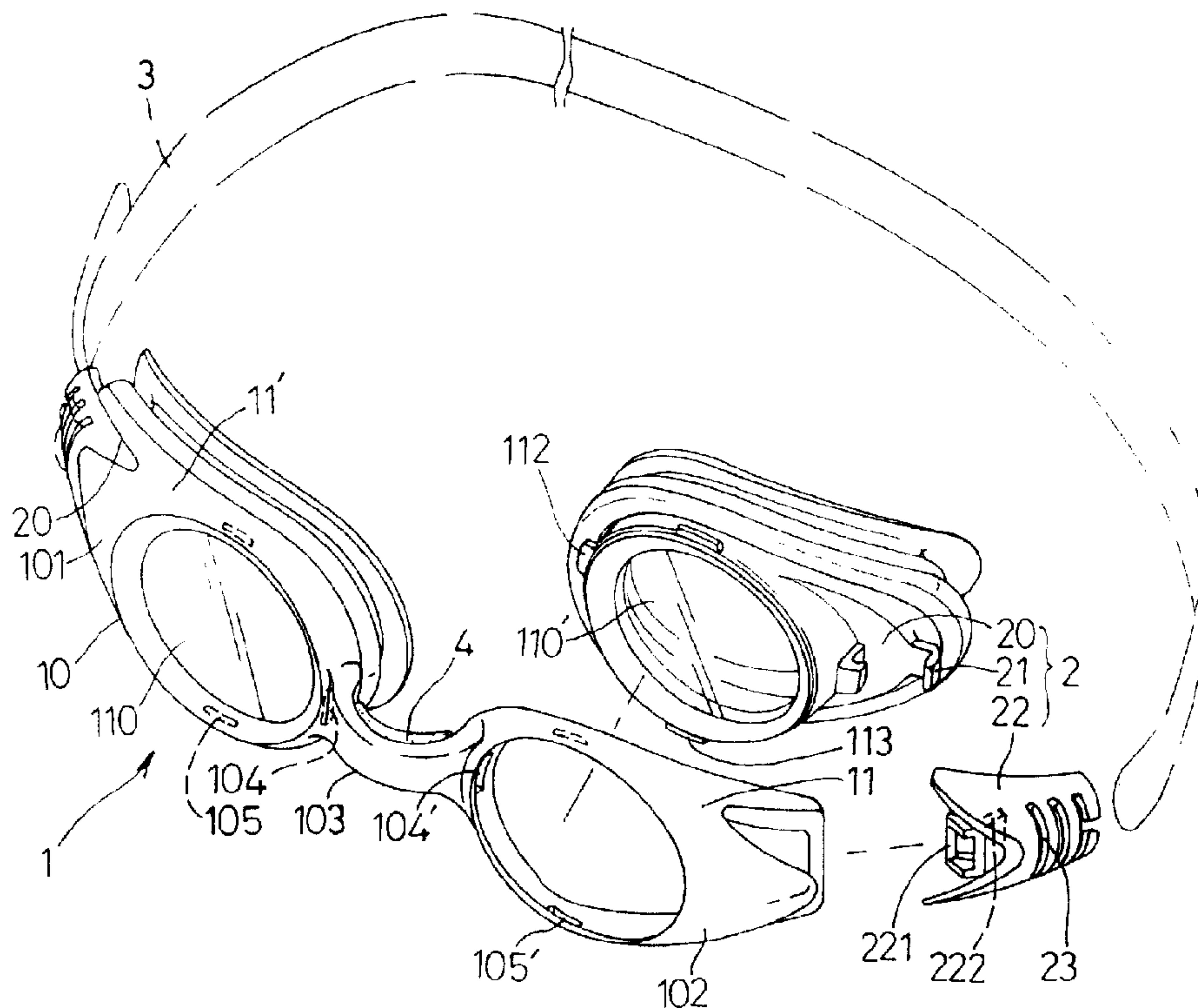
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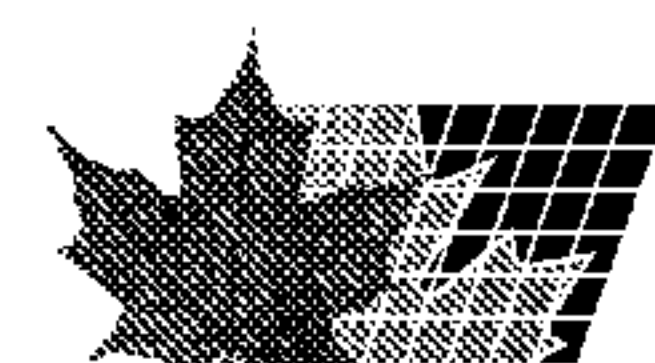
(54) Titre : LUNETTES DE NAGE

(54) Title: SWIMMING GOGGLES



(57) Abrégé/Abstract:

The invention provides a new type of swimming goggles, characterized in that: a binding frame is used for assembling the main lens frames. The binding frame includes left and right frame units and a nose bridge that combines the left and right frame units. On the left and right frame units near the nose bridge is at least one clasp unit. On the main frame unit corresponding to the clasp unit is a clasp piece. On one side of the left and right frame units away from the nose bridge is an assembling device, thus with the coordinative assembly of the clasp unit, clasp piece and the assembling device, the main frame unit can be securely fastened onto the binding frame.



Abstract of the Disclosure

The invention provides a new type of swimming goggles, characterized in that:
a binding frame is used for assembling the main lens frames. The binding frame
includes left and right frame units and a nose bridge that combines the left and right
5 frame units. On the left and right frame units near the nose bridge is at least one clasp
unit. On the main frame unit corresponding to the clasp unit is a clasp piece. On one
side of the left and right frame units away from the nose bridge is an assembling
device, thus with the coordinative assembly of the clasp unit, clasp piece and the
assembling device, the main frame unit can be securely fastened onto the binding
10 frame.

Title

Swimming goggles

Field of the Invention

5 The subject invention relates to a type of swimming goggles, particularly to one with a nose bridge involving flexible frames and clasp pieces to combine left and right lens frames.

Background of the Invention

10 There are different ways to join the lens frames of swimming goggles, which can be grouped into two categories: one is a monobloc lens frame form, protective pads and the nose bridge, the other involves fastening the left and right lens frames using a nose bridge. The monobloc type of nose bridge is a simple type that does not allow adjustment. This nose bridge specification will suit the general consumer
15 public. The fastening type allows multiple-step adjustment. The consumer can make proper adjustment to suit the span between the user's eyes. Both types have their market share, and their respective advantages and disadvantages in production. Basically, therefore, the development and improvement of the monobloc type and the fastening type are designed separately.

20 However, the monobloc type of swimming goggles that are easy to use without the need for adjustment has become the mainstream in appeal and design. The conventional monobloc type of swimming goggles is generally made from hard resin (polycarbonate resin), in which entire frame body is rigid without flexibility, so it only suits users with a specific face shape. As a result, another conventional design
25 has been developed which uses soft resin to shape the lens frames, nose bridge and protective pads as one monobloc. The nose bridge serves the concurrent purposes of joining the two frames and providing proper flexibility and avoiding deformation of

the frame body due to the lens accommodation. This lens type cannot withstand the pulling force of the headband, and special consideration must be paid to the construction of the swimming goggles, such as: reinforced strength design for the nose bridge, or reinforced strength against frame body deformation, so that the frame body will not be deformed.

Brief Description of the Invention

The objective of the subject invention is to provide a new swimming goggle construction with an innovative design that can be conveniently assembled and comfortably worn by the user. Said swimming goggles provide twin frames made from a flexible material to join the frames. Thus, the twin frames can be separately considered in terms of design and suitable material selection. Considerations can be taken to require the nose bridge to be equipped with adequate tensile strength, to provide a monobloc type exterior configuration and fastening assembly style.

The subject invention is characterized in that: the swimming goggles have a binding frame that is used for the assembly of the main lens frame. The binding frame includes the left and right frame units and a nose bridge linking the left and right frame units. On the left and right frame units near the nose bridge is a clasp unit. On the main frame unit corresponding to the clasp unit is a clasp piece, thereby securing the main frame unit to the binding frame.

As mentioned in the above characteristics, the clasp unit has clasp grooves on the left and right frame units corresponding to the nose bridge. The clasp piece is formed as a post on the main frame unit.

Another characteristic of the subject invention is that, on one side of the left and right frame units, away from the nose bridge, and between the main frame units is an assembling device. The assembling device includes assembling grooves on the left and right frame units. A check unit on the main frame unit corresponds to the

assembling groove with a joining unit in contact with the check unit. On the joining unit are headband positioning grooves to enable assembling the main frame unit with the left and right frame units.

The assembling groove is an opening facing from outside to the inside of the left and right frames. The check unit is a clasp piece formed on the main frame unit. The joining unit refers to a first clasp arm and a second clasp arm formed on one side of a plate body and in contact with the clasp piece. On the plate surface are several grooves for the positioning of the headband.

10 **Brief Description of Drawings**

Fig. 1 is a perspective, disassembled view of the subject swimming goggle invention.

Fig. 2 is a perspective, assembled view of the subject swimming goggle invention.

15 Fig. 3 is a sectional, assembled view of the subject swimming goggle invention.

Figs. 4 and 5 illustrate how the subject swimming goggle invention is assembled.

Brief Description of Numerals

- 20 1 swimming goggles
- 10 binding frame
- 101 and 102 left / right frame unit
- 103 nose bridge
- 104, 104', 105, 105' mortise
- 25 11 and 11' lens frame
- 112, 113 tenon
- 2 assembling device

20	assembling hole
21	check unit
22	joining unit
23	positioning groove
5 221	first clasp arm
222	second clasp arm
3	headband device
4	foam sponge

10 **Detailed Description of Preferred Embodiment**

Please refer to Figs. 1 and 2, the subject swimming goggles invention 1 is comprised of a binding frame 10, two lens frames 11 and 11', an assembling device 2, and a headband device 3. The binding frame 10 is made of a flexible material involving a left and a right frame unit 101 and 102, serving to accommodate the lens frames 11 and 11' in a way that the lens 110 and 110' accommodate the lens frames 11 and 11' match the left/right frame units 101 and 102. The left and right frame units 101 and 102 are joined by a nose bridge 103. On the nose bridge 103 is a foam sponge 4 to provide comfortable contact with the user's nose ridge. Near the nose bridge on the left and right frame units 101 and 102 are three clasping units, respectively, elongated square grooves 104, 104' located on the nose bridge 103 and elongated round grooves 105, 105' located on the top and bottom positions of the left and right frame units 101 and 102. Said lens frames 11 and 11' are made of hard polycarbonate resin material, assembled on the left and right frame units 101 and 102, which accommodate the lens 110 and 110', and, corresponding to the three clasp mortises 104 (elongated square groove) 105, 105' (elongated round grooves) are clasp tenons, such as an elongated square tenon 112 to match the elongated square groove 104, and elongated round tenons 113 to match the elongated round grooves

105, 105'.

Furthermore, on the left/right frame units 101 and 102 and away from the nose bridge 103 is the installation of an assembling device 2. Said assembling device 2 includes an assembling hole 20 located on the left/right frame units 101 and 102. A
5 check unit 21 located on the lens frames 11 and 11' matching said assembling hole 2, and a joining unit 22 pulling through the assembling hole 20 to be engaged to the check unit 21. On the joining unit 22 is a positioning groove 23 to fix the headband of the swimming goggles. This construction is characterized by more solid assembly of the main frame unit with the left and right frame unit. The assembling hole 20 on the
10 left/right frame unit 101 and 102 is an opening facing obliquely from outside toward the inside. The check unit 21 forms a clasp jut with the lens frames 11 and 11'. The joining unit 22 involves a first clasp arm 221 and a second clasp arm 222 formed on one side of a plate body to catch the clasp jut (check unit 21), and on the plate surface are several positioning grooves 23 to fasten the headband device 3.

15 Please refer to Figs. 3, 4 and 5, which explain how one side of the lens frame is assembled. As shown in the drawing, firstly, the lens frame 11 is slightly inclined, so that its elongated square tenon can be clasped inside the elongated square groove 104 of the frame unit 101. The lens frame 11 is depressed so the elongated round tenon 113 is fastened with the elongated round groove 105, now the lens frame 11 is
20 primarily set in place. Secondly, the assembling device 2 is inclined and inserted into the assembling hole 20, so the first clasp arm 221 is in contact with one end of the clasp jut (check unit 21), which is further depressed so that the second clasp arm 222 is linked to the other end of the clasp jut (check unit 21), thus the assembling device 2 is depressed and secured with the lens frame 11. One point worth mentioning is
25 that, the installation of the plate-shaped assembling device 2 serves to complement the assembling hole 20 with an opening, so the appearance of the swimming goggles can be enhanced. The assembling device 2 provides additional positioning effect to

the headband device 3.

The above description has proved that the subject invention is able to achieve its objective to satisfy the requirements for a patent right. However, the above description covers merely a preferred embodiment of the subject invention. All
5 equivalent modifications and variations deriving from the above description shall be included in the intent and spirit of the subject claims.

Claims

1. A new swimming goggle construction, comprising:

a binding frame, with left and right frame units and a nose bridge that joins the left and right frame units, on the left and right frame units and near the nose bridge bearing at least one clasp unit;

lens frames, assembled on said left and right frame units, accommodating lenses, with clasp devices corresponding to the clasp units on the left and right frame units; and

a headband device, located on two sides of the lens frames.

2. The swimming goggles as recited in Claim 1, wherein said clasp unit involves clasp grooves on the left/right frame unit corresponding to the nose bridge; while said clasp unit forms a clasp post on the lens frame unit.

3. The swimming goggles as recited in Claim 1, wherein on one side of said left/right frame units, away from the nose bridge, and between the lens frames is an assembling device, said assembling device including assembling holes on the left and right frame units, a check unit on the lens frame unit and corresponding to said assembling hole, and clasp units that run through the assembling hole to engage with said check unit, and on said clasp units are headband positioning grooves, thus to enable more solid assembling of the main frame unit with the left and right frame units.

4. The swimming goggles as recited in Claim 3, wherein said assembling hole refers to an open groove facing obliquely from outside to inside on the left and right frame units. Said check unit refers to the formation of a clasp tenon on the main lens frame. Said clasp unit refers to a first clasp arm and a second clasp arm that are formed on one side of a plate body to engage said clasp tenon. On the plate surface are several positioning grooves to secure the headband.

5. The swimming goggles as recited in Claim 2 or 4, wherein said binding frame is

made of flexible material, and the main frame unit is made of hard polycarbonate resin material.

6. The swimming goggles as recited in Claim 5, wherein on one side of the nose bridge on said binding frame, in contact with the user's nose ridge, is fitted with
5 foam sponge to provide wearing comfort.

7. The swimming goggles as recited in Claim 6, wherein the clasp units on said left and right frame units are arranged in a triangle, respectively located near the nose bridge and on the top and bottom positions of the frame units.

8. The swimming goggles as recited in Claim 7, wherein the clasp unit located near
10 the nose bridge is an elongated square groove, the post corresponding to the main frame unit is an elongated square tenon that can be fitted to said elongated square groove. The clasp units corresponding to the top and bottom of the left and right frame units are elongated round grooves, while the posts corresponding to the main frame unit are elongated round tenons that can be fitted to said elongated round
15 grooves.

9. The swimming goggles as recited in Claim 8, wherein on said main frame unit is a protective pad to provide better contact with the user's face.

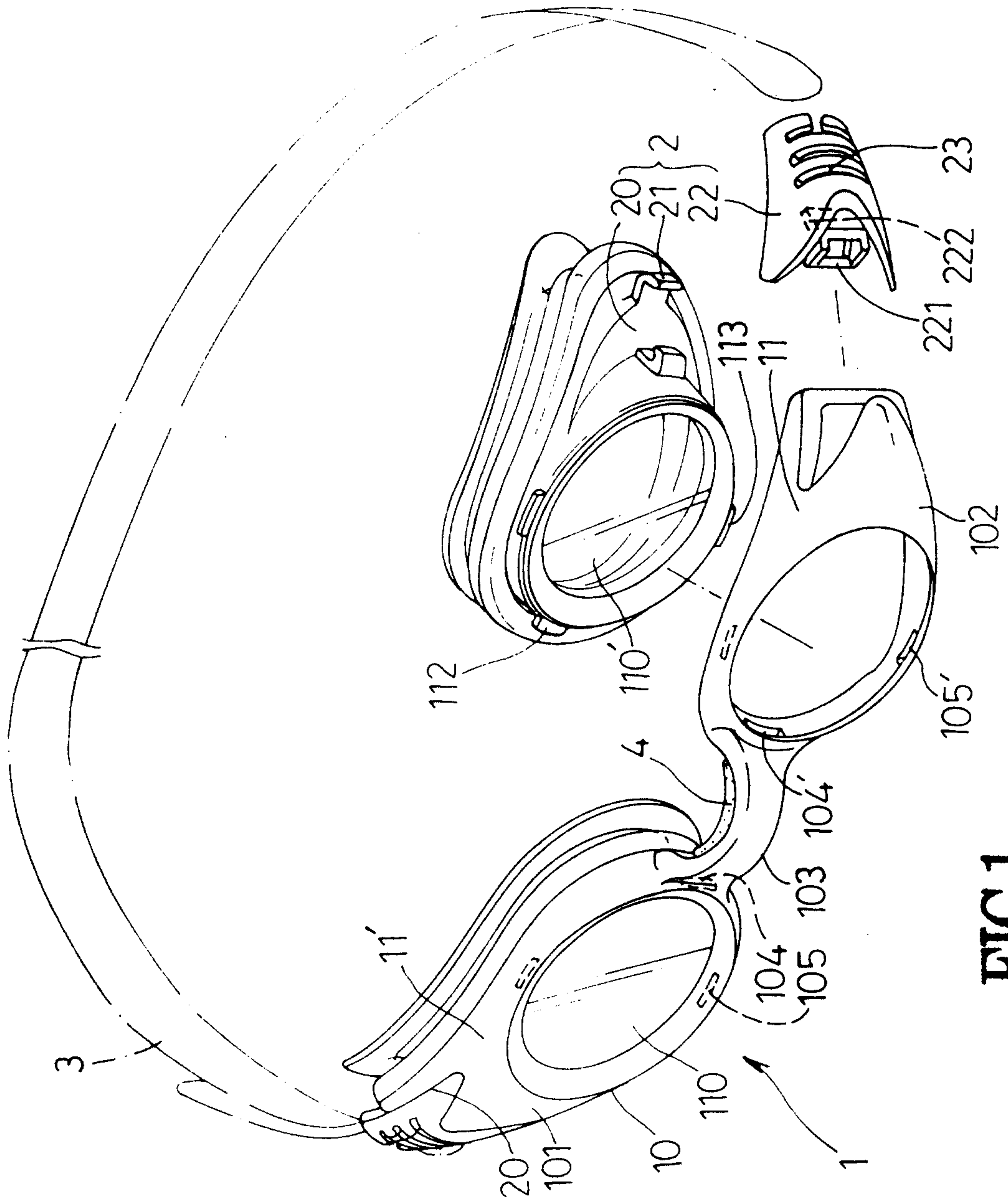


FIG.1

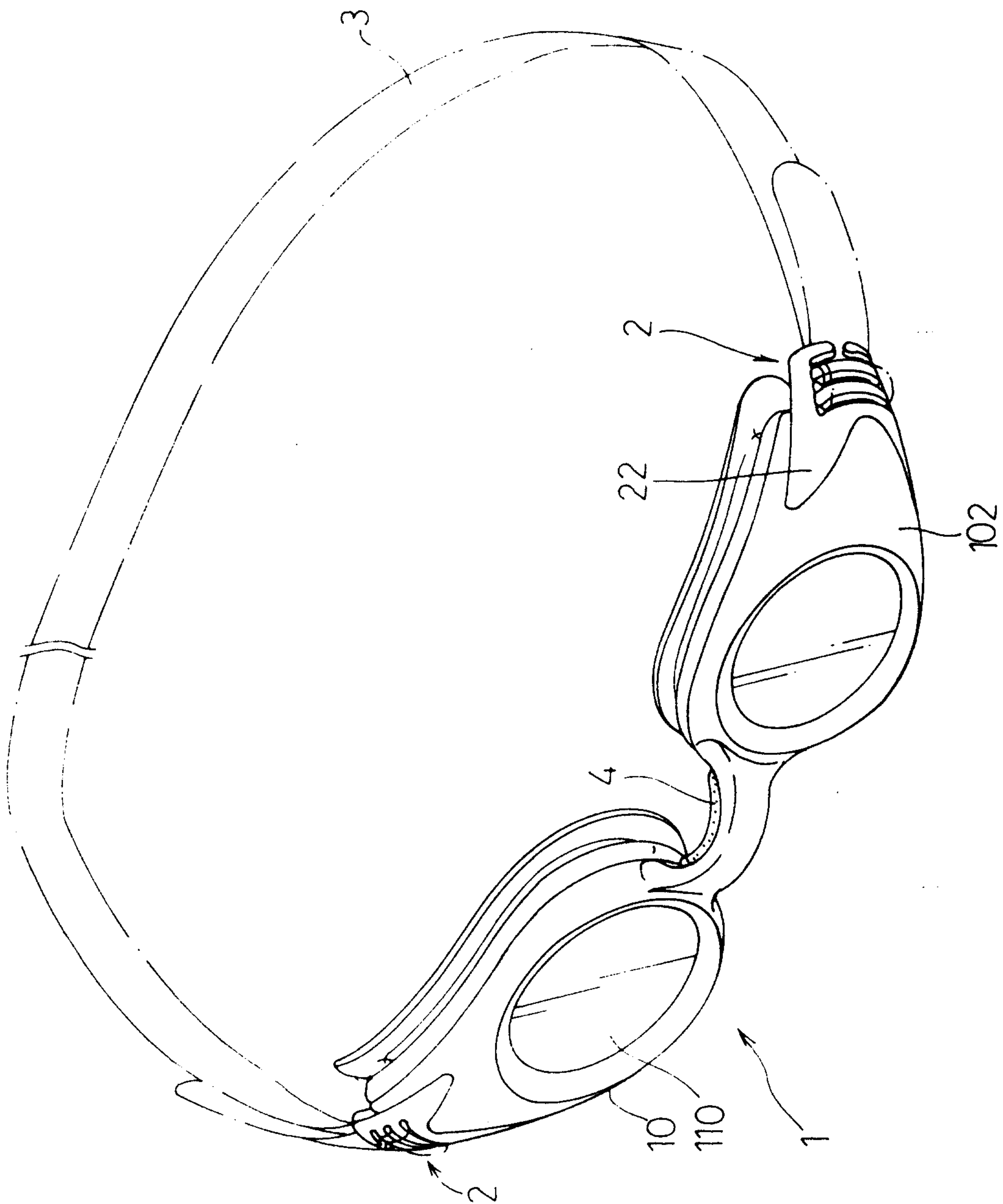


FIG. 2

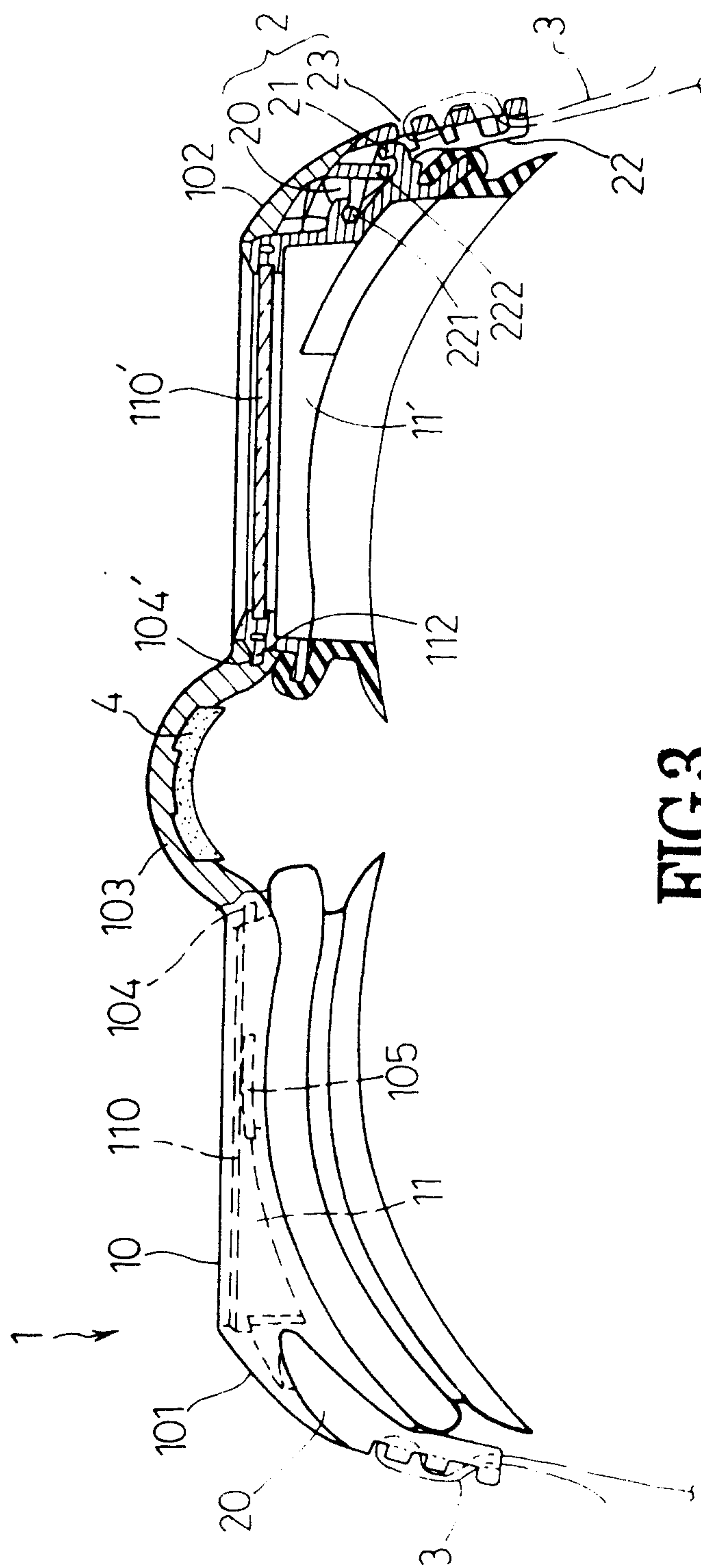


FIG.3

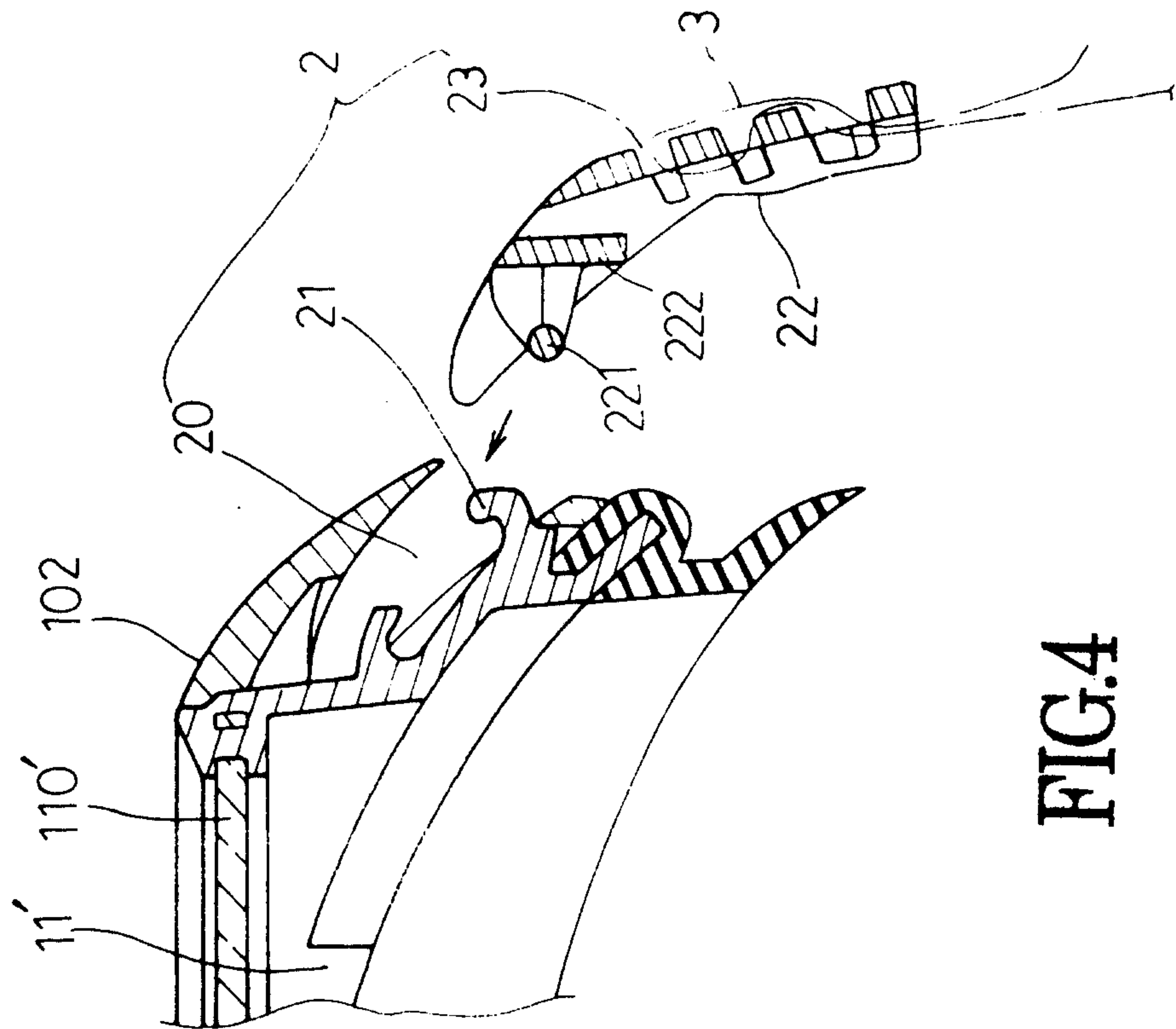


FIG. 4

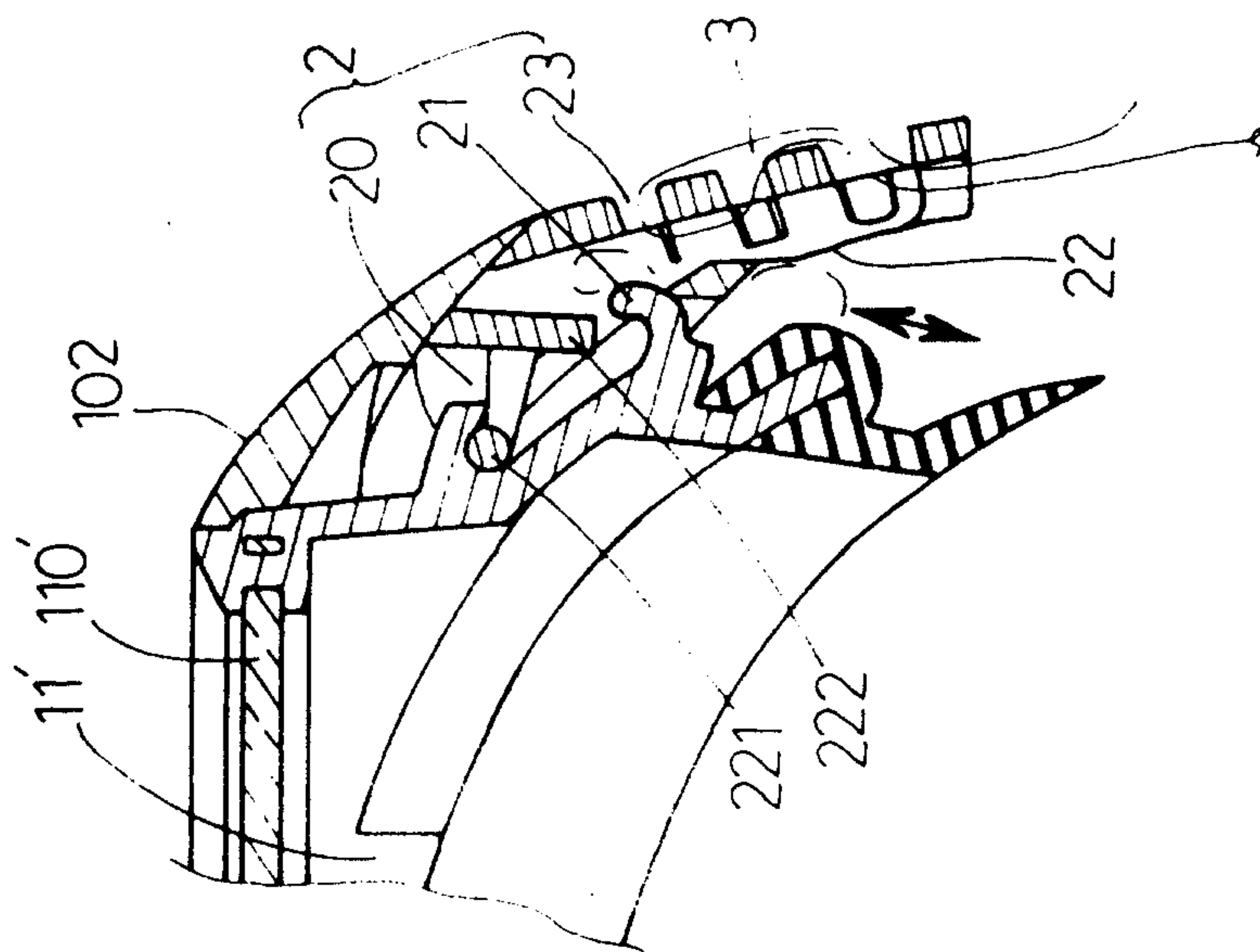


FIG. 5

