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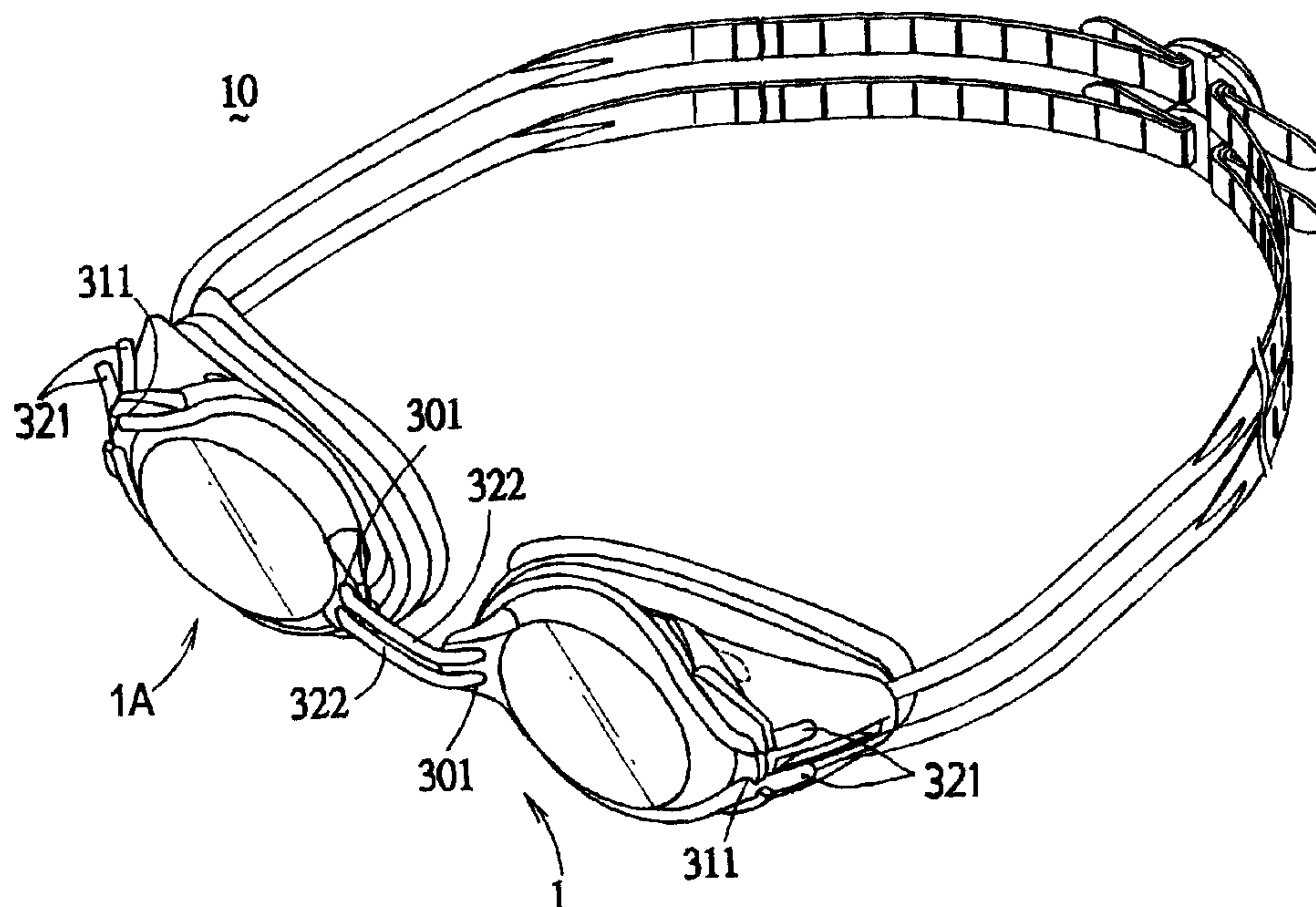
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(54) Titre : LUNETTES DE NAGE

(54) Title: SWIMMING GOGGLES



(57) Abrégé/Abstract:

A pair of swimming goggles comprises a first and a second single-eye modules, each of which includes a lens frame that has lens units mounted thereon, a module nose bridge which is mounted on the side of the lens frame, a module strap which is mounted on opposition the module nose bridge, wherein the module nose bridge include at least a first connection set which is disposed on the lens frame, the first connection set have a first position portion and a nose body which can be connected to the first position portion. The module strap including a matching mean which is mounted on the lens frame, a join mean which can be engaged to the matching mean, a strap element which is assembled on the join mean, and a fastener having a first and a second jacket set which are mounted on the free end of the strap element, such that the user can chose the dual single-eye module which are respectively conformity with own each eye's diopter and can be easily assembled into a pair of swimming goggles when in use.

ABSTRACT

A pair of swimming goggles comprises a first and a second single-eye modules, each of which includes a lens frame that has lens units mounted thereon, a module nose bridge which is mounted on the side of the lens frame, a module strap which is
5 mounted on opposition the module nose bridge, wherein the module nose bridge include at least a first connection set which is disposed on the lens frame, the first connection set have a first position portion and a nose body which can be connected to the first position portion. The module strap including a matching mean which is mounted on the lens frame, a join mean which can be engaged to the matching mean,
10 a strap element which is assembled on the join mean , and a fastener having a first and a second jacket set which are mounted on the free end of the strap element, such that the user can chose the dual single-eye module which are respectively conformity with own each eye's diopter and can be easily assembled into a pair of swimming goggles when in use.

Title**SWIMMING GOGGLES****FIELD OF THE INVENTION**

The present invention relates to a swimming goggles, more particularly to a
5 swimming goggles which have independently dual single-eye modules and can be
easily assembled into a pair of swimming goggles when in use.

BACKGROUND OF THE INVENTION

Conventionally, there are two lens frames in a pair of swimming goggles and
each of the lens frame has a lens which is no diopter. Now with the request of
10 customers and a special using, there is a diopter of the lenses in a pair of swimming
goggles, but the myopic swimming goggles can not conformity with the customers
due to each of the lens of the swimming goggles is the same diopter and each eye of
some of user is different diopter, thereby the user need to buy a new single-eye lens
frame which is conformity with the user's eye to replace the unconformity ones.
15 However, the user of the single-eye lens frame may find it difficult to disassemble or
assemble the single-eye lens frame when the user replaces it, because the strap of the
swimming goggles should be respectively passed through each lens frame and a
fastener in a certain direction, and the user tends not to understand how to do this and
not to find it convenient. Moreover, it is wasteful that the single-eye lens frame can
20 not continue to be used after it was replaced.

OBJECTS OF THE INVENTION

The object of the present invention is to provide a swimming goggles that can
overcome the drawback of the aforementioned prior art.

25 The main object of the present invention is to provide a swimming goggles which
have independently dual single-eye modules and can be easily assembled into a pair of
swimming goggles, such that the user can chose the dual single-eye module which

are respectively conformity with own each eye's diopter when the user buy a pair of swimming goggles.

Another object of the present invention is to provide a swimming goggles which have independently dual single-eye modules and each of which have a strap, a
5 fastener and a nose bridge that are assembled into one unit, so the dual single-eye modules can be easily assembled into a pair of swimming goggles and can be provide the swimming goggles have more fluent process in production line.

To achieve the above objects, the present invention is characteristic in that a swimming goggles have independently dual single-eye modules and each of which
10 includes a lens frame that has lens units mounted thereon, a module nose bridge which is mounted on the side of the lens frame, a module strap which is mounted on opposition the module nose bridge, wherein the module nose bridge include at least a first connection set which is disposed on the lens frame, the first connection set have a first position portion and a nose body which can be connected to the first position
15 portion. The module strap includes a matching mean which is mounted on the lens frame, a join mean which can be engaged to the matching mean, a strap element which is assembled on the join mean , and a fastener which is mounted on the free end of the strap.

Another features of the present invention is further to provide a second
20 connection set which is opposite the first connection set and mounted on the lens frame.

According to the above features of the present invention, the first position portion are generally two through holes or two clasp holes. The second first position portion are generally two clasp holes.

25 Further, according to the above features of the present invention, the nose body is generally a flexible strap which could be shorter or longer in length, the flexible strap is shorter when the lens frame just has the first connection set with two clasp

holes, and the short flexible strap is clipped either the two clasp holes on the end ,
otherwise, the lens frame both have the first connection set with the two through
holes and the second connection set with the two clasp holes, the flexible strap is
longer and which will be respectively clipped either the two clasp holes and the two
5 through holes on the end.

According to the above features of the present invention, the matching mean
includes two grooves have in spaced relationship each other which are mounted on
the lens frame, a post which is mounted between the two grooves and which is far
away from the lens unit that is extended from the lens frame, and the post has a hook
10 which is bent toward the lens unit. The join mean is a arch board which have
protrusions are respectively and oppositely the two grooves that can match each
other, comprising a pass through set is mounted on the arch board of the join mean
and which is opposite the post of the matching mean, further have a recess, a opening
and a stopper thereon, wherein the stopper is located on the end edge of the recess
15 and is opposite the hook of the post of the matching mean, such the above structure
that the protrusions will engage to the grooves, and the stopper of the recess will
engage to the hook of the post of the matching mean while the join mean is
assembled into the lens frame.

Moreover, the present invention is further featured in that the fastener includes
20 a first jacket set and a second jacket set, wherein the first jacket set have a pass
through area for the strap providing the strap passing through and a first receiving
portion. The second jacket set also have a pass through area for the strap passing
through and a second receiving portion can be assembled the first receiving portion
into integrity the fastener.

25 According to the above features of the present invention, the pass through area
of the first and the second jacket set respectively have a socket and a pole which is
mounted within the socket and separated the socket into two passing space. The first

receiving portion of the jacket set is an elongated slot which disposed on the edge of the first jacket set, and which have two end that are respectively open and close. The second receiving portion of the second jacket set is a bar which disposed on the second receiving portion that can be matched with the elongated slot of the first receiving portion, such that both the first and the second jacket set can easily match each other without direction when in assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings of which:

FIG. 1 is a perspective view of disassembled of the first preferred embodiment of single-eye module according to the present invention;

FIG.2 is a perspective view of assembled of the first preferred embodiment of single-eye module according to the present invention;

FIG.3 is a section view of the single-eye module taken along line A-A in FIG. 2;

FIG. 4 is a perspective view of disassembled of the first and second jacket set of the present invention;

FIG.5 is section view of the matching mean and the join mean of the module strap of the present invention;

FIG.6 is a section view of the first receiving portion of the second preferred embodiment;

FIG.7 is a perspective view illustrating the first and the second single-eye modules are disassembled of the present invention ;

FIG.8 is a perspective view illustrating the first and the second single-eye modules are assembled into a pair of swimming goggles of the present invention ;

FIG.9 is a perspective view of the second embodiment of swimming goggles

according to the present invention;

FIG.10 is a perspective view of the third embodiment of swimming goggles according to the present invention.

5 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring now to the drawing, the swimming goggles of the present invention is illustrated in FIG. 8, the swimming goggles of the present invention comprises a first single-eye module 1 and a second single-eye module 1A, each of the first and the second single-eye modules 1, 1A are the same structures, here is just illustrated the first single-eye module 1 in FIG 1 to 6, in order to explain convenience and understanding. The first single-eye module 1 comprises a lens frame 2, a module nose 3 and a module strap 4, wherein the lens frame 2 have a lens unit 20 which is formed the front portion of the lens frame 2, and a lip 21 which is formed the outer periphery of the rear portion of the lens frame 2 that can be engaged a gasket 5 thereon.

The module nose 3 includes a first connection set 30, a second connection set 31 and a nose body 32, wherein the first connection set 30 is formed extended from the lens frame 2 which has a first position portion are two through holes 301, referring to in FIG. 3, the through holes 301 are generally taper-shape which near the gasket 5 is smaller than the opposite side that can be smoothly passing through the through holes 301. The similar design is showed in FIG. 6, the through holes 301 are converse taper-shape which near the gasket 5 is larger than the opposite side that can be adapted to the nose body 32 while the nose body 32 is passed through the through holes 301 and prevented from the nose body 32 contacting the gasket 5. Referring once more FIG. 1, the second connection set 31 is formed the lens frame 2 which have two clasp 311 for clipping the nose body 32. The nose body 32 is a flexible strap which have two end 321,322, wherein the end of the flexible strap 321 can be passed through either the through holes 301 and can be posited either the clasp holes 311 as

shown in FIG.2, and the other end of the flexible strap 321 will be connected and matched the second single-eye module 1A as shown in FIG. 7 to FIG. 8. Moreover, between the first and the second connection set 30,31 have fixing groove 22 which is disposed on the outer periphery of the rear of the lens frame 2 and which can be served to the nose strap 32 position in the first and the second connection set 30,31 as shown in FIG. 2. the gasket 5 has a annular groove 50 is capable of position the nose strap 32.

The module strap 4 includes a matching mean 40, a join mean 41, a strap element 42 and a fastener 43, wherein the matching mean 40 includes two grooves 401 have in spaced relationship each other which are mounted on the lens frame 2, a post 402 which is mounted between the two grooves 401 and which is far away from the lens unit 20 and is extended outward the lens frame 2, and the post 402 has a hook 403 which is bent toward the lens unit 20. The join mean 41 is a arch board which have protrusions 411 are respectively and oppositely the two grooves 401 that can match each other, and a pass through set 412 is mounted on the arch board of the join mean which is opposite the post of the matching mean, and the through set 412 have a recess 413, a opening 414 and a stopper 415 thereon, wherein the stopper 415 is located on the end edge of the recess 413 which is opposite the hook 403 of the post 402 of the matching mean 40, such the above structure that the protrusions 411 will engage to the grooves 401, and the stopper 415 of the recess 413 will engage to the hook 403 of the post 402 while the join mean 41 is assembled into the lens frame 2.

Referring once more to in FIG. 1, the strap element 42 is generally rubber material which is passing through the opening of the join mean 41 and two free end 421,422 of the strap element 42 is posited on the same side of the join mean 41 after the strap element 41 was assembled. The fastener 43 Includes a first jacket set 431 and a second jacket set 432, each of the first and the second jacket set 431, 432 have a pass through area providing each strap passing through and have a first and a second receiving portion

which are respectively mounted on the edge of the first and the second jacket sets 431,432, and each of the pass through area of the first and the second jacket set 431,432 respectively have a socket 433 and a pole 434 which is mounted within the socket 433 and separated the socket 433 into two passing space that can be capable of serving the strap element 42 passing through (The free end 421 of the strap 42 have assembled into The first jacket set 431 as shown in FIG. 1).

Moreover, The first receiving portion of the jacket set 431 is an elongated slot 435 which be disposed on the edge of the first jacket set 431, and the end of the elongated slot 435 is open and the opposite end is close, and the second receiving portion of the second jacket set 432 is a bar 436 which be disposed on the edge of the second jacket set 432 that can be matched with the elongated slot 435 of the first receiving portion, such that both the first and the second jacket sets can easily match each other without direction.

Referring to FIG. 7 to 8, during assembly, the user should be select the first single-eye module 1 and the second single-eye module 1A which are respectively conformity with the user's every eye, and taking the first and the second jacket sets 431,432 of the first single-eye module 1 assemble into the second and the first jacket sets 432,431 of the second single-eye module 1A by the elongated slot 435 match with the bar 436. then taking the free end 322 of each the nose body 32 of the first and the second single-eye module 1, 1A is respectively passing through the through hole 301 of the first and the second connection set 30,31 and is respectively clipped in the clasp hole 311 of the first and the second connection set 30,31, such that the first and the second single-eye module 1, 1A will be easily assembled into a pair of swimming goggles as shown in FIG. 8.

Referring to FIG.9-10 illustrate the second and third embodiment of a pair of swimming goggles 1',1'' according to the present invention. As show in FIG. 9, the second embodiment is generally similar to the first preferred embodiment, but the

first connection set 30' are two clasp holes 301' and cancel the second connection set, such structures make the nose body 32' will be shorter and can be easily assembled into a pair of swimming goggles.

As show in FIG. 10, the swimming goggles 1" is the third embodiment which is
5 generally similar to the first preferred embodiment, but the first connection set 30' are two clasp holes 301', in other words, both the first and second connection sets 30", 31" are two clasp holes 301', such structures can be easily assembled into a pair of swimming goggles .

While the present invention has been described in connection with what is
10 considered the most practical and preferred embodiment, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements, included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

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What is claimed is:

1. A pair of swimming goggles comprising:

5 a first single-eye module and a second single-eye module for dual assembly, wherein each of the first and second single eye module includes:

a lens frame having a lens unit formed on a front portion thereof;

10 a module nose bridge having a first connection assembly disposed on an edge of the lens frame, said first connection assembly having a first position portion is two through holes, a second connection assembly having a second position portion is two clasp holes disposed on the lens frame opposite the first connection assembly, and a nose body is a flexible strap having a first and a second end
15 passing through the through hole of the first position portion and clasped by the clasp hole of the second position portion;

a module strap having a strap element with a first and second free end and being connected to a side of the lens frame adjacent the nose body; and

20 a fastener having a first jacket assembly and a second jacket assembly mounted respectively on the first and second free end of the strap element, each of the first and second jacket assembly includes:

25 a pass through portion for receiving the strap element having a socket and a pole mounted within the socket to separate the socket into two passing spaces;

30 a first receiving portion being an elongated slot disposed on the end of the first jacket assembly, said elongated slot being open at a first end and closed at a second end; and

a second receiving portion being a bar disposed on the end of the second jacket assembly whereby the bar is co-operable with the elongated slot such that the first and second single eye module are capable of dual assembly;

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whereby the first and second jacket assembly are mutually co-operable such that the first and second single eye module are capable of dual assembly.

2. The swimming goggles as claimed in claim 1 further comprising a matching mean
10 mounted on the lens frame, and a join means engageable with the matching means and through which may be fed the strap element.

3. The swimming goggles as claimed in claim 2, wherein the matching mean includes two
15 grooves in spaced apart relationship and a post mounted between the two grooves and extending away from the lens frame remote from the lens unit, the post has a hook which is bent toward the lens unit, and the join mean is an arch board having:

protrusions positionable adjacent the two grooves of the matching means,

20 a pass through portion positionable adjacent the post of the matching means having a recess, an opening and a stopper located on the end edge of the recess and positionable adjacent the hook of the post,

25 whereby the protrusions engage the grooves and the stopper engages the hook when the join means is assembled onto the lens frame.

4. The swimming goggles as claimed in claim 3, wherein the two through holes of the first position portion is generally tapered.

30 5. The swimming goggles as claimed in claim 4 further comprising a fixing groove located between the first and the second connection assembly and which is disposed on the upper

and lower portion of the outer periphery of the lens frame to support the nose body passing through the first and second connection assembly.

6. A single-eye module for dual assembly into a pair of swimming goggles comprising:

5

a lens frame having a lens unit formed on a front portion thereof,

10

a module nose bridge having a first connection assembly extends from an inner edge of the lens frame, said first connection assembly having a first position portion is two clasp and a nose body is a flexible strap having a first and a second end, the first end is clipped by either of the two clasp holes of the first connection assembly and the second end is clippable by either of the two clasp holes of the first connection assembly of a second single eye module;

15

a module strap having a strap element with a first and second free end and being connected to a side of the lens frame adjacent the nose body; and

20

a fastener having a first jacket assembly and a second jacket assembly mounted respectively on the first and second free end of the strap element, each of the first and second jacket assembly includes:

25

a pass through portion for receiving the strap element having a socket and a pole mounted within the socket to separate the socket into two passing spaces;

30

a first receiving portion being an elongated slot disposed on the end of the first jacket assembly, said elongated slot being open at a first end and closed at a second end; and

a second receiving portion being a bar disposed on the end of the second jacket assembly whereby the bar is co-operable with the elongated slot

such that the first and second single eye module are capable of dual assembly;

whereby the first and second jacket assembly are mutually co-operable such that the first and second single eye module are capable of dual assembly.

7. The single-eye module as claimed in claim 6, further comprising a matching mean mounted on the lens frame, and a join mean engageable with the matching means and through which may be fed the strap element.

8. The single-eye module as claimed in claim 7, wherein the matching means includes two grooves in spaced apart relationship and a post mounted between the two grooves and extending away from the lens frame remote from the lens unit, wherein the post has a hook which is bent toward the lens unit.

9. The single-eye module as claimed in claim 8 wherein the join means is an arch board having:

protrusions positionable adjacent the two grooves of the matching means,

a pass through portion positionable adjacent the post of the matching means having a recess, an opening and a stopper located on the end edge of the recess and positionable adjacent the hook of the post,

whereby the protrusions engage the grooves and the stopper engages the hook when the join means is assembled onto the lens frame.

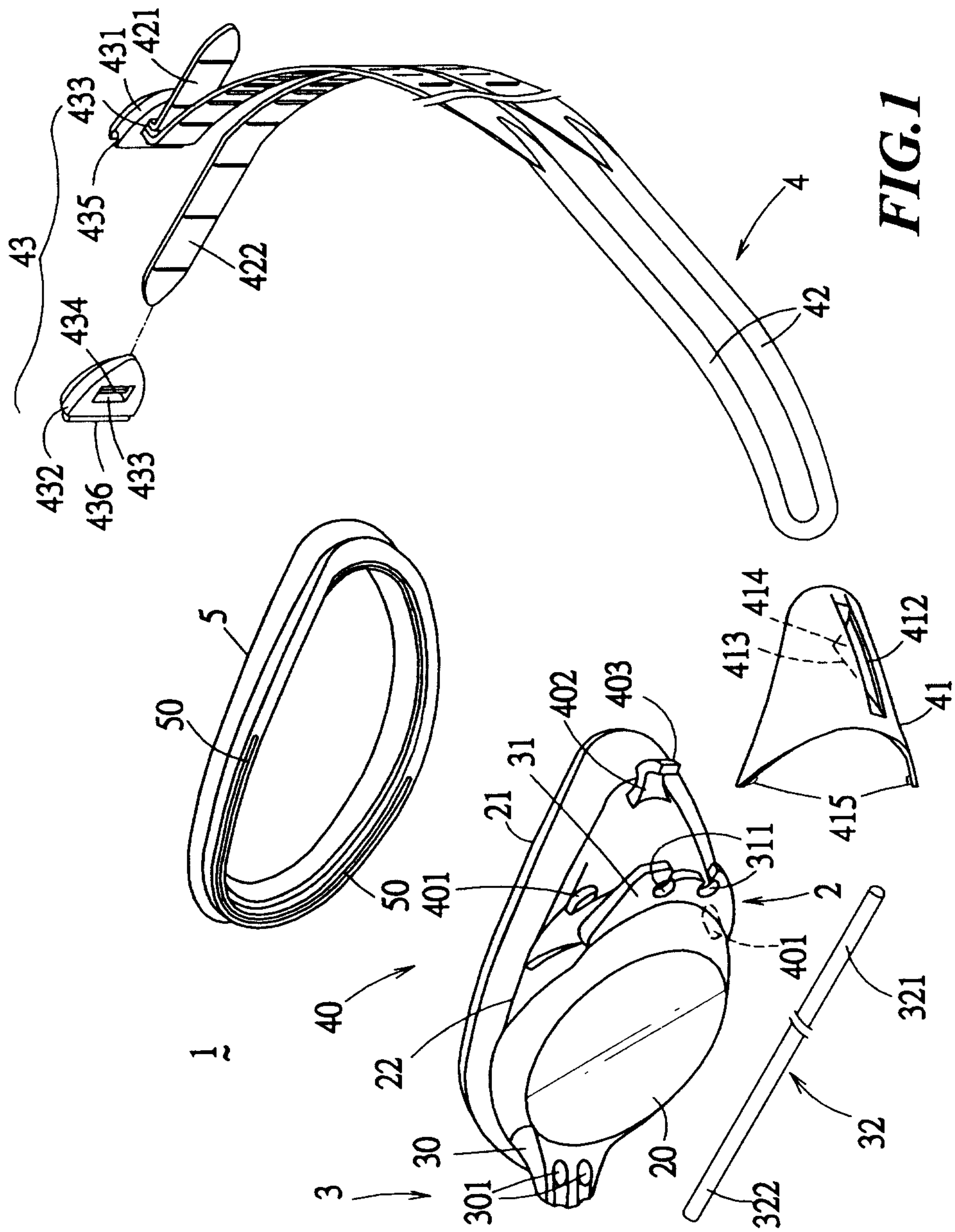
10. The single-eye module as claimed in claim 9 further comprising a lip on the outer periphery of the rear portion of the lens frame for receiving a gasket.

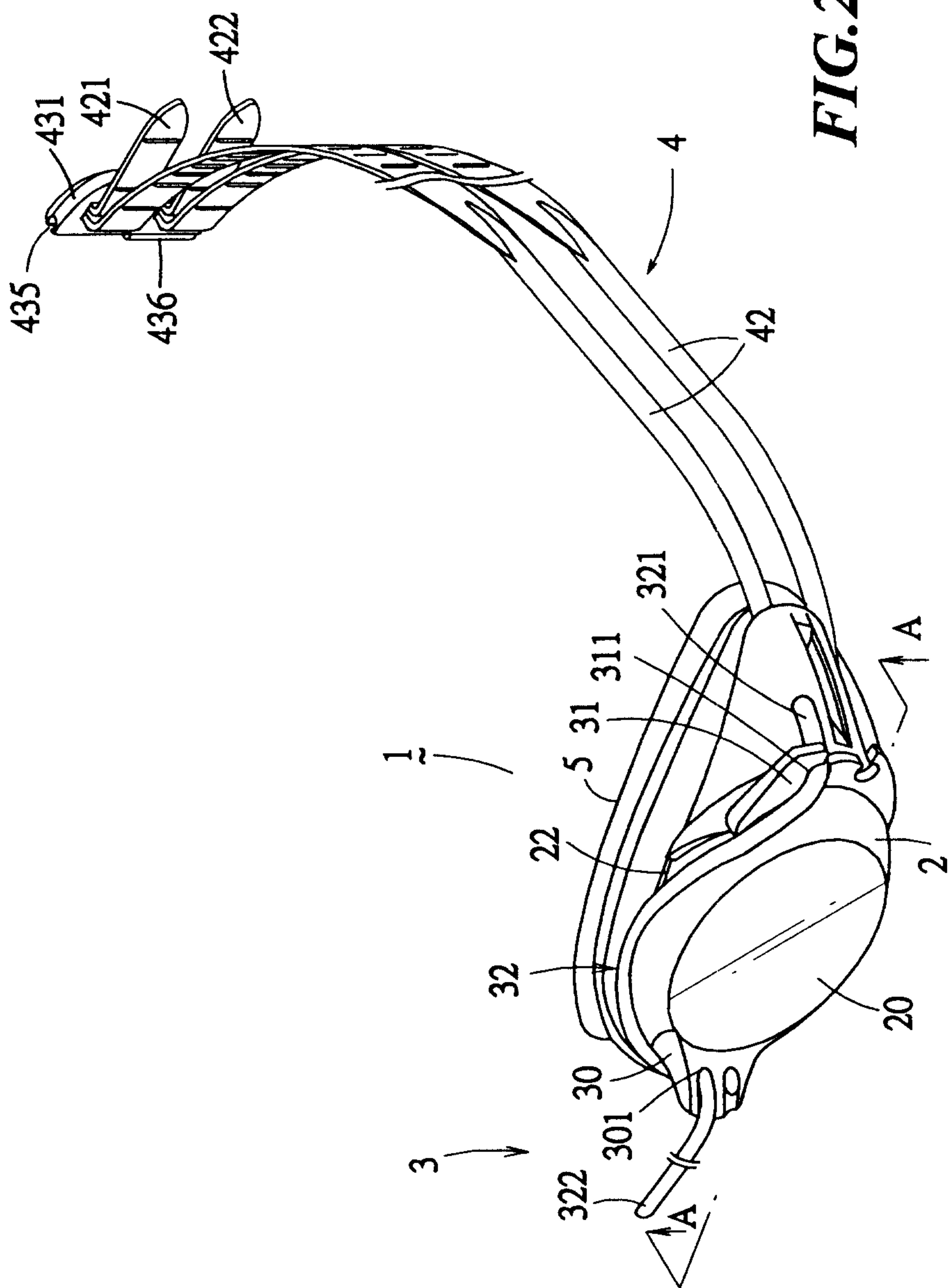
11. The single-eye module as claimed in claim 10 further comprising a fixing groove is located between the first and the second connection assembly and which is, disposed on the upper and lower portion of the outer periphery of the lens frame to support the nose body passing through the first and second connection assembly.

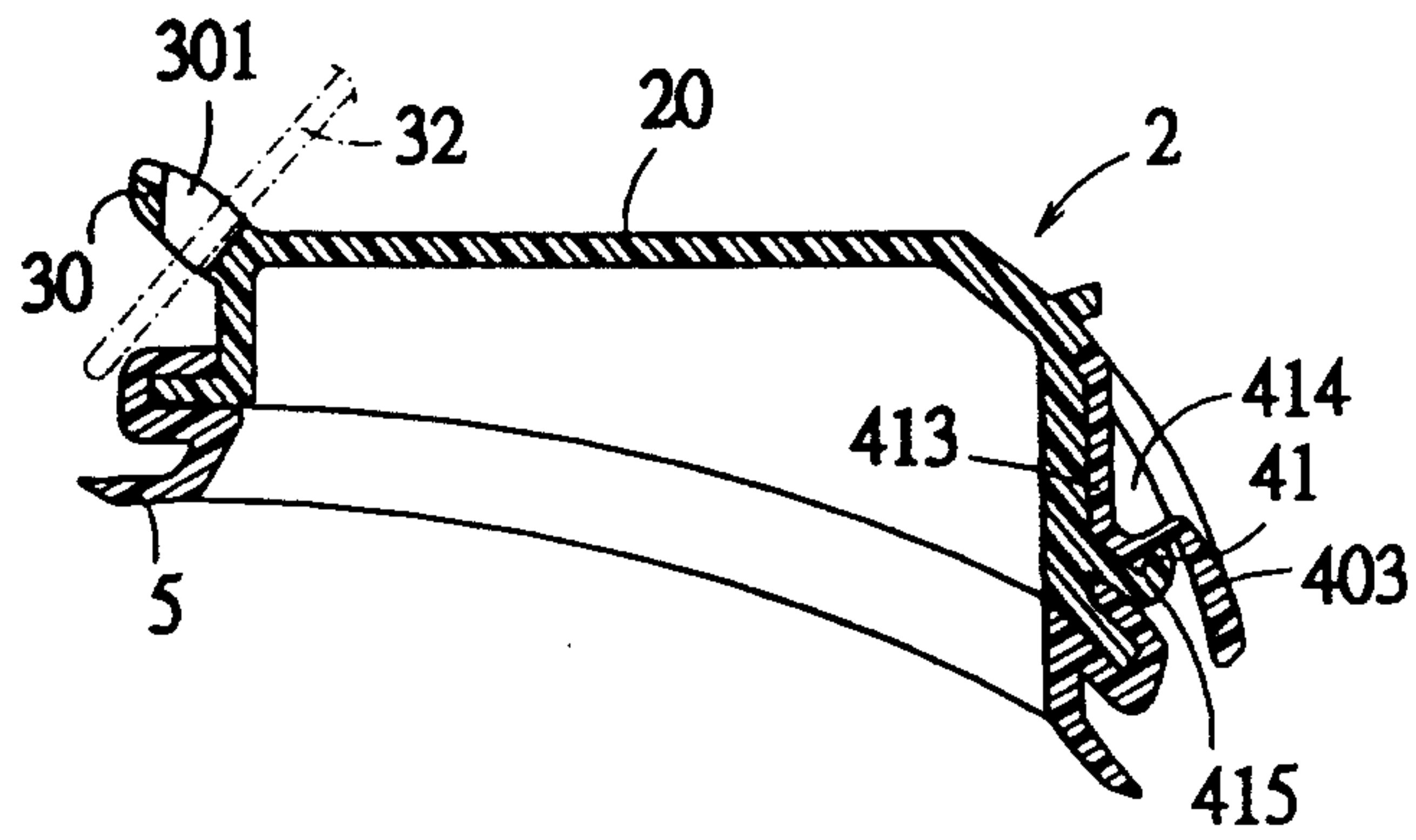
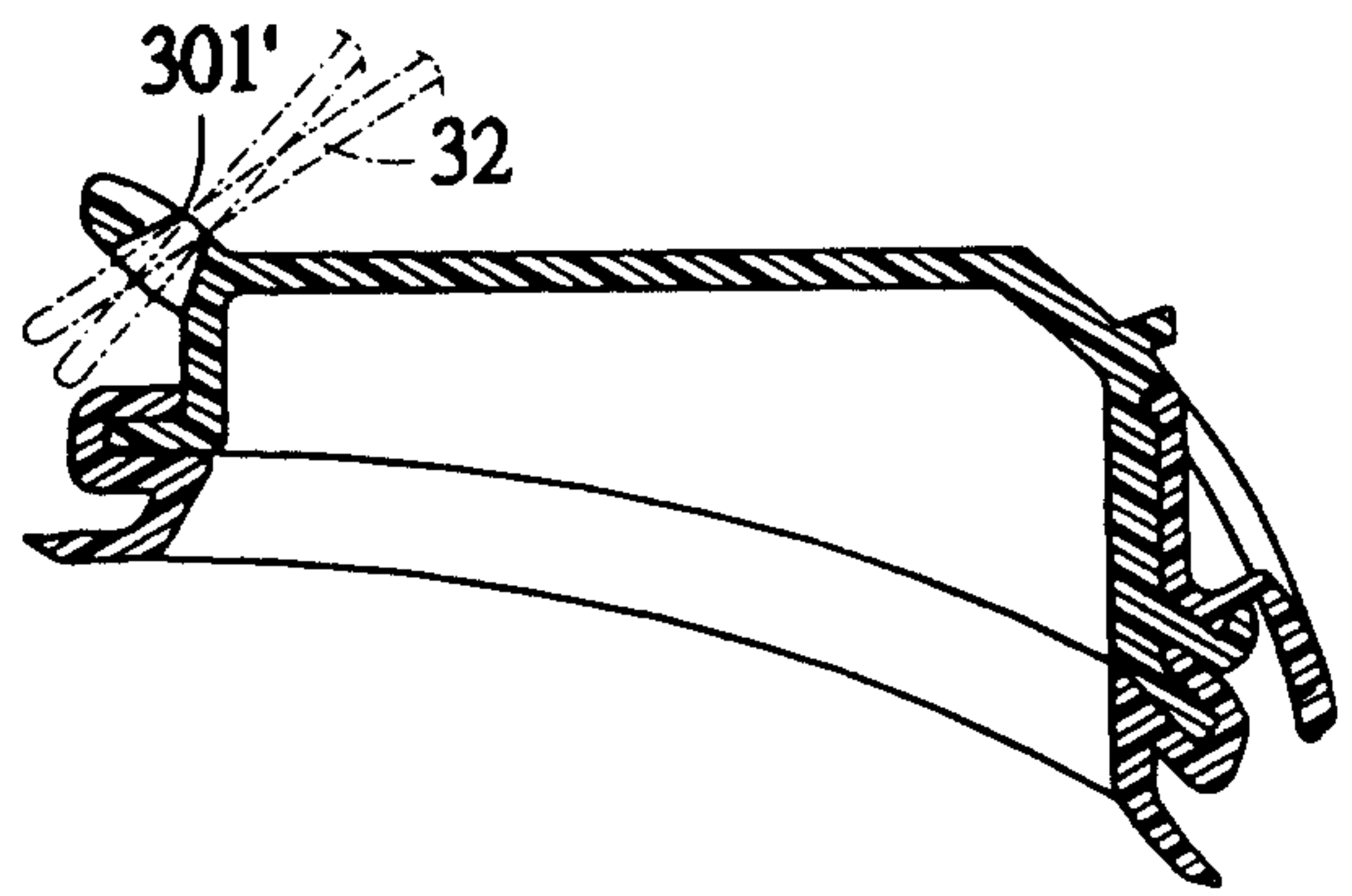
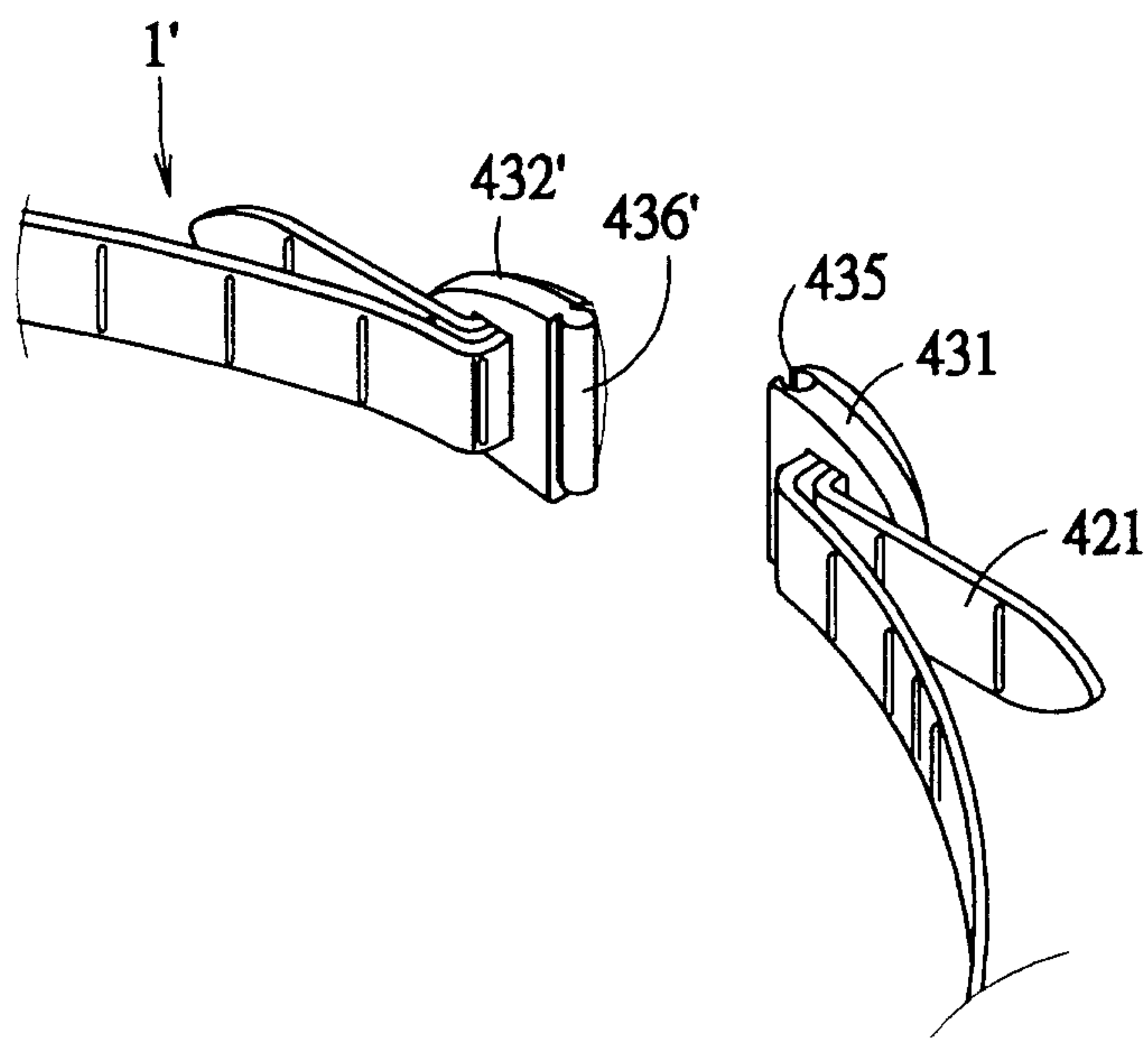
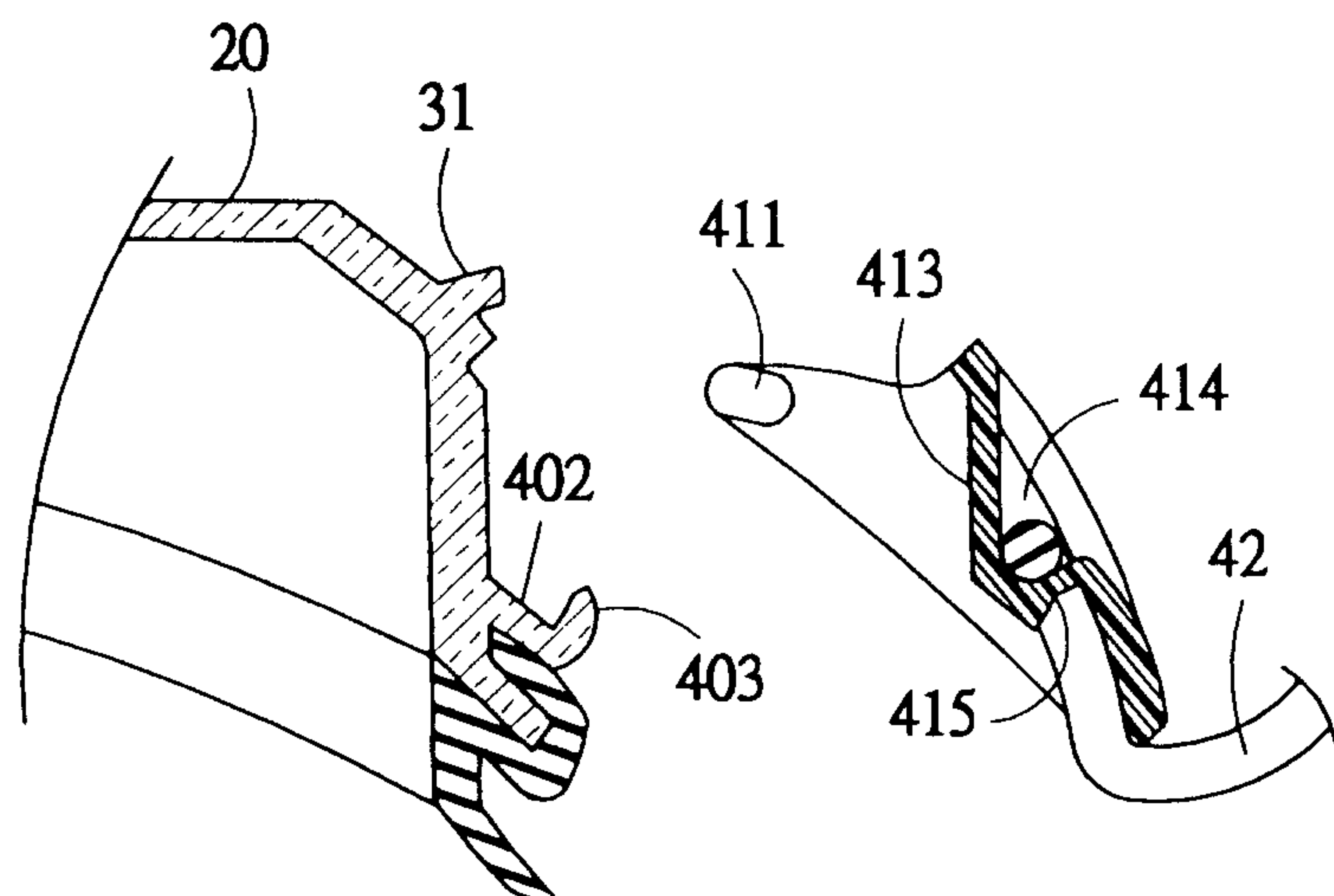
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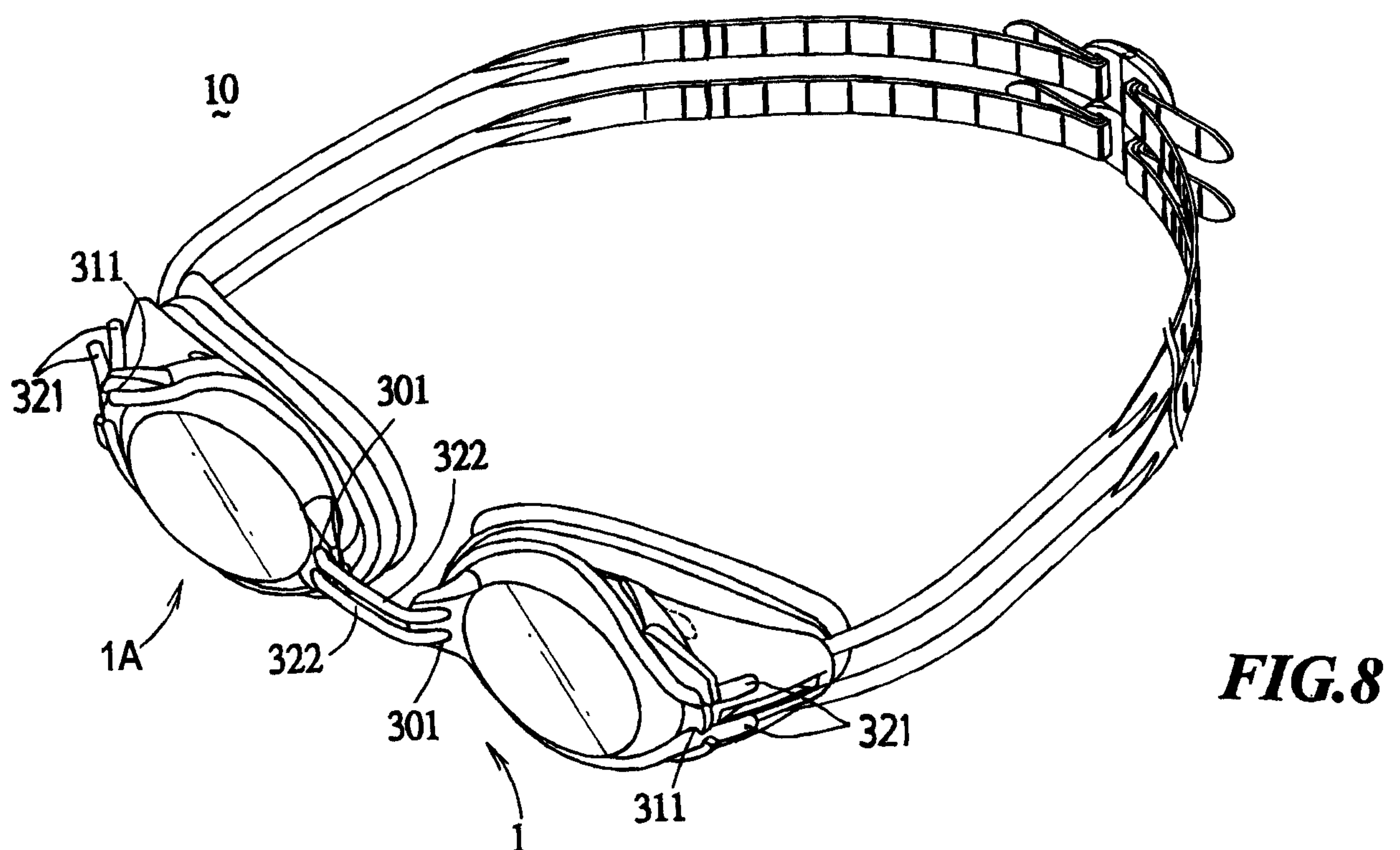
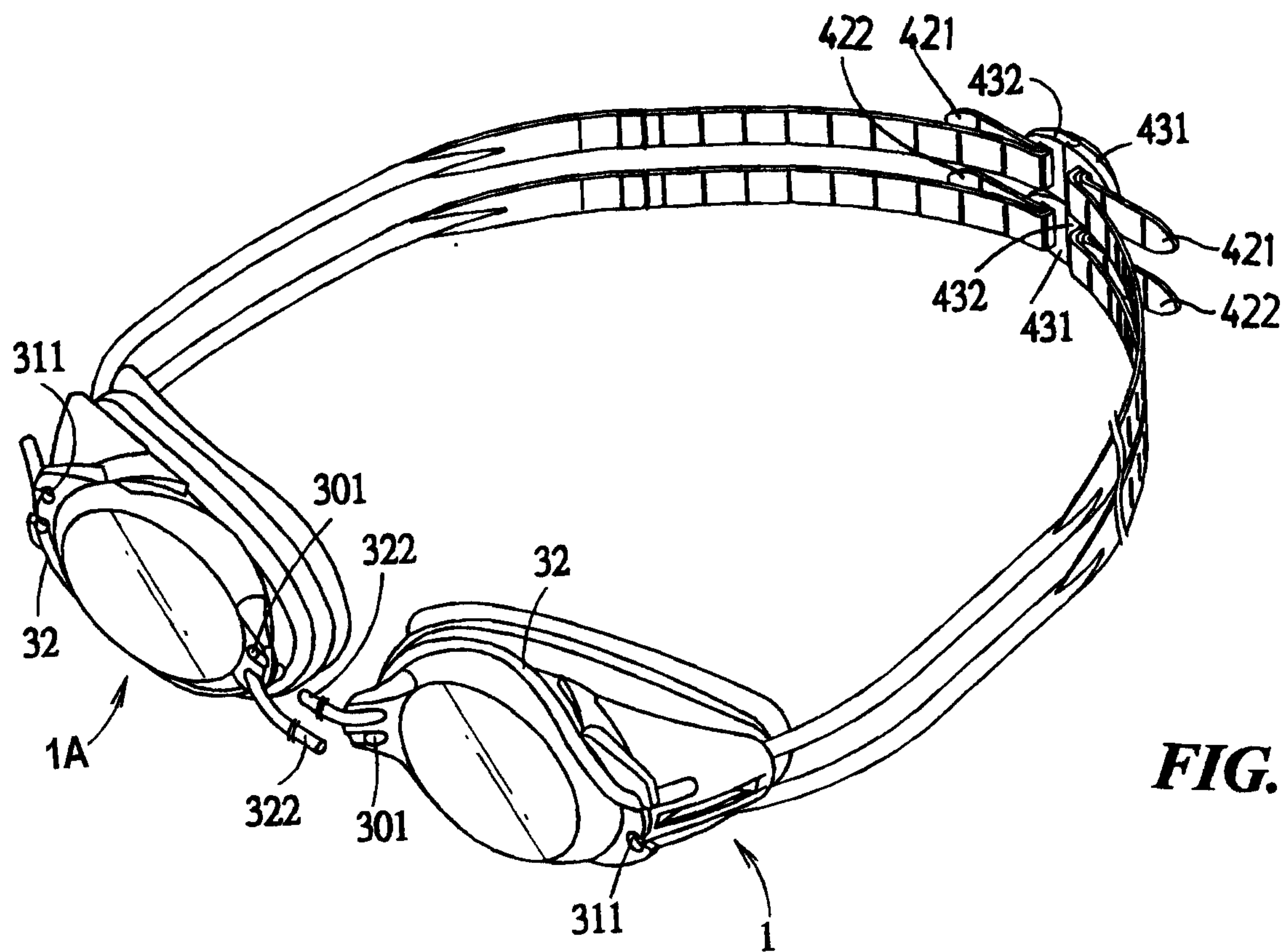
12. The single-eye module as claimed in claim 6, wherein further comprising a second connection assembly having a second position portion is two clasp holes disposed on the lens frame opposite the first connection assembly, such that the first and/the second end of the nose body are respectively passing through and clasped by, the clasp hole of the first and the second position portion.

10





**FIG. 3** (A-A)**FIG. 6****FIG. 4****FIG. 5**



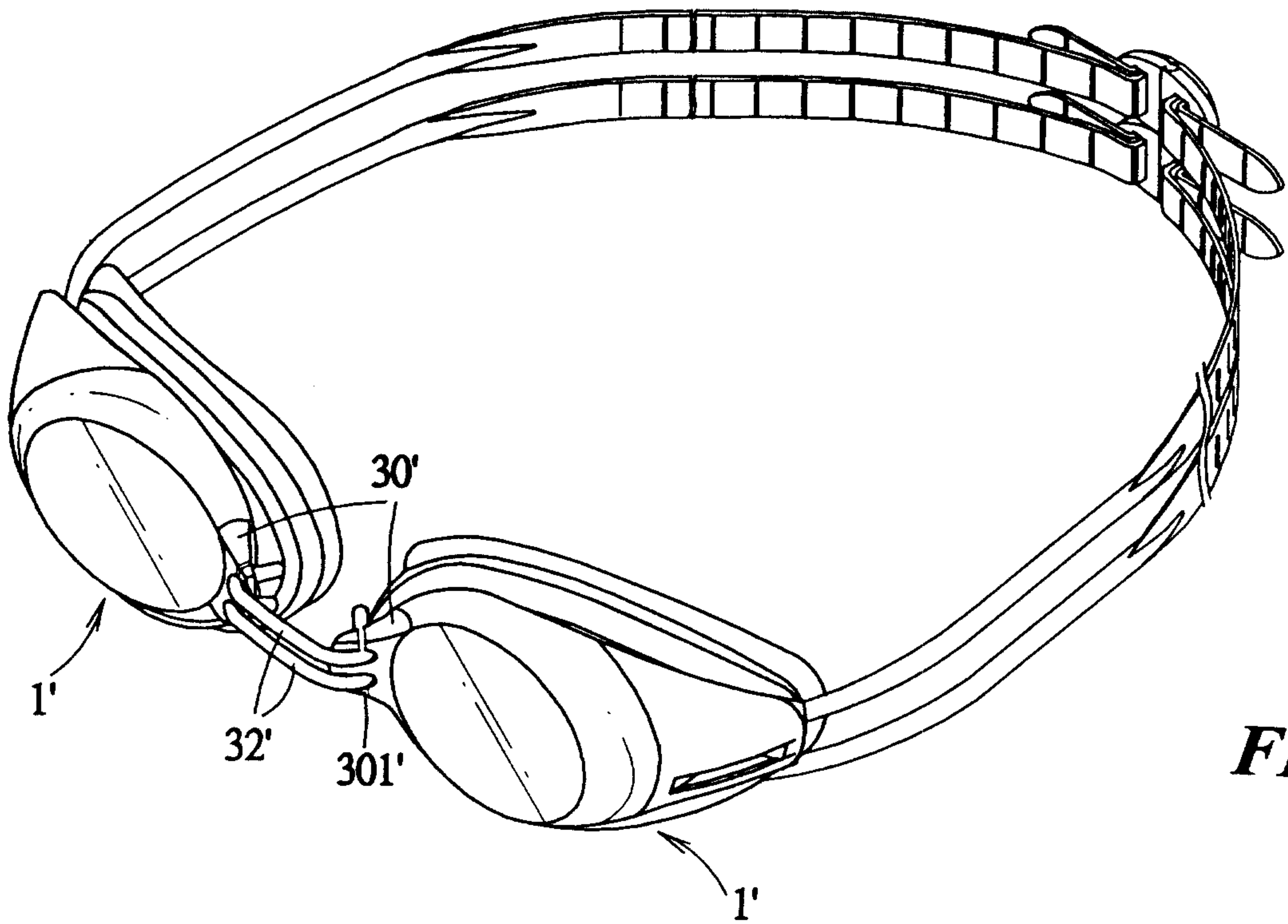


FIG. 9

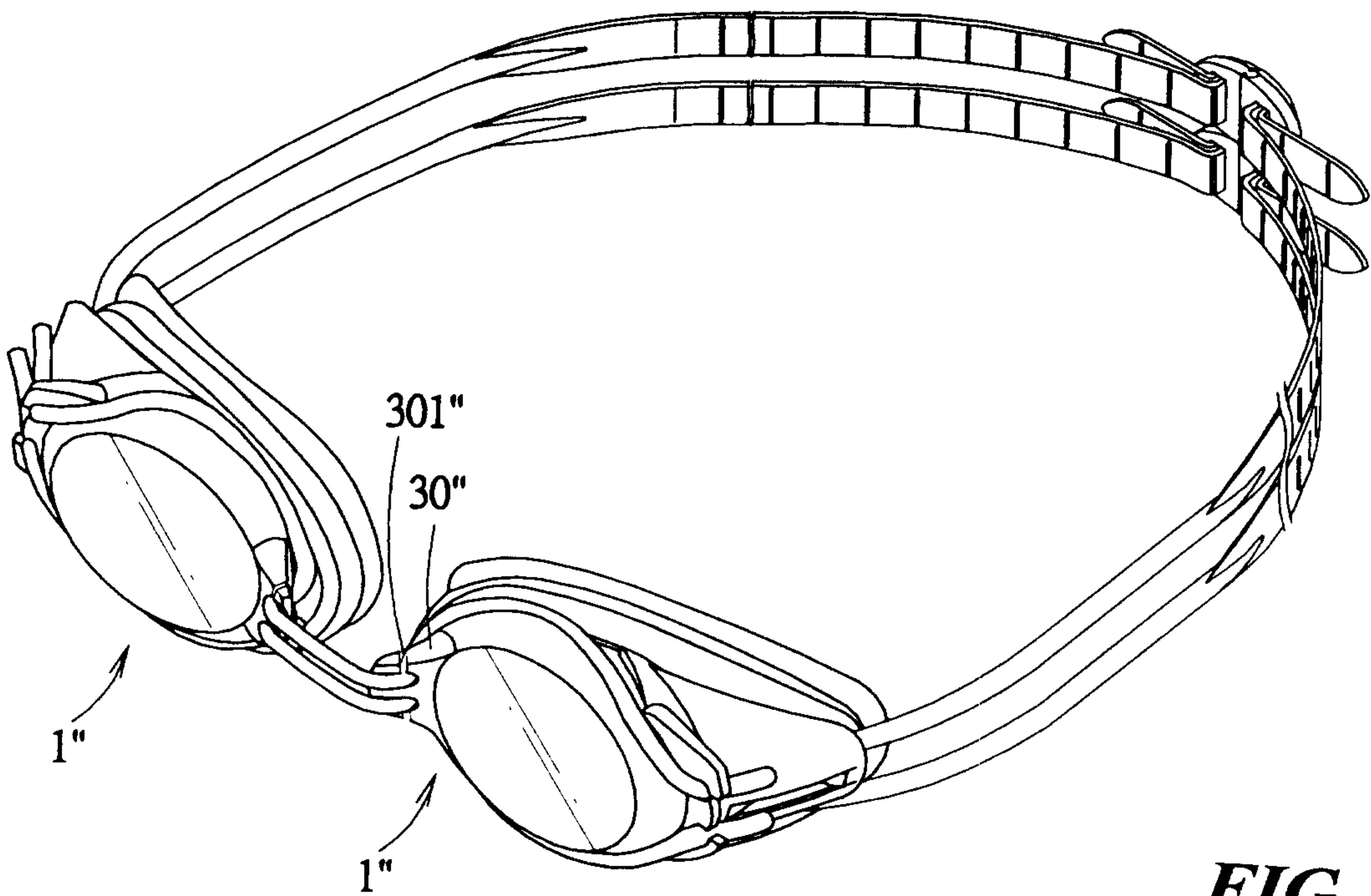


FIG. 10

