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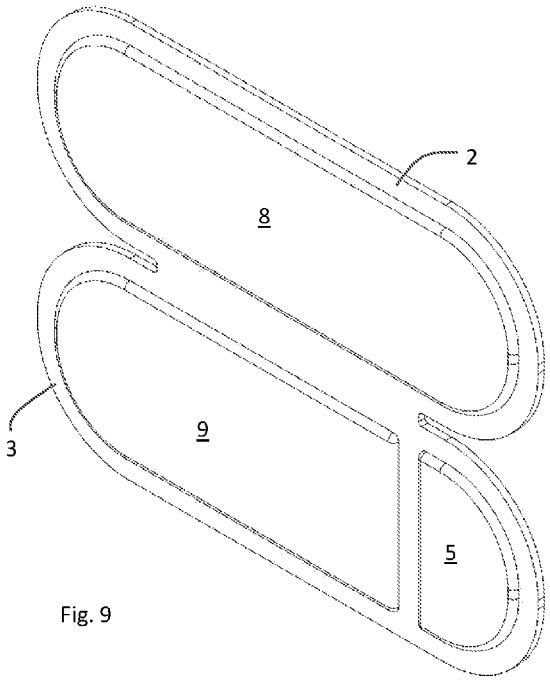

Fig. 9

(57) Abstract: The present invention relates to a case for eyeglasses comprising a first housing configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing configured to enclose a rear surface of the eyeglasses; an intermediate connecting member configured to provide a connection between the first housing and the second housing; a second connecting member connected to the first housing such that the first housing is connected to the second housing in a collapsible manner; and a connection assembly having a connecting part which is configured to be connected to the second connecting member and is connected to the second housing.

WO 2021/183074 A1

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A CASE FOR EYEGLASSES

TECHNICAL FIELD

The present invention relates to a collapsible case for eyeglasses containing a magnetic connecting element.

BACKGROUND OF THE INVENTION

A case for eyeglasses essentially comprises a first housing enclosing the rear surface of the eyeglasses when the temples of the eyeglasses are folded (or when the eyeglasses has no temple) and a second housing enclosing the front surface of the eyeglasses. A connecting element made of a flexible material is typically provided between the first housing and the second housing. Thus, the eyeglasses may be inserted into the case (or may be taken out from the case) by the second housing being opened and closed over the first housing.

A collapsible connecting element is provided between the first housing and the second housing so as to keep the eyeglasses in a safe manner inside the case. The connecting element may be arranged in various configurations. For instance, embodiments with a zipper, button, hook and loop fastener may be arranged.

The existing cases for eyeglasses have some operational drawbacks. For example in case of a connecting element with a zipper, the zipper may lose its function as the teeth of the zipper lose their harmony with each other over time, or by the external elements such as textile material being stuck between the teeth. In case of a connecting element with a button, the repeated opening and closing of the case may cause mechanical wear on the button over time, thereby causing the button function ineffective. On the other hand, the connection structure of the existing cases for eyeglasses does not provide a relatively practical use either.

Known eyeglass cases, on the other hand, include relatively rigid arrangements for the glasses to maintain their position while in the case. These arrangements often contain geometric properties designed to conform to the external form of the glasses. This eliminates the flexibility of glasses with different forms to be kept in the same case.

The trend of a user's desires is that tools that increasingly become an essential part of the user's daily life may be integrated with other accessories. For instance, mobile devices such as cell phones or smartphones have become an essential part of everyday life. The ability of a case for eyeglasses to be integrated into a mobile phone is practical for ease of handling. In fact, a case for eyeglasses with a coil embedded therein and suitable electrical connection may be converted into a wireless charging device for the mobile phone.

BRIEF DESCRIPTION OF THE INVENTION

The object of the invention is to provide a functionally effective case for eyeglasses.

The present invention relates to a case for eyeglasses comprising a first housing configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing configured to enclose a rear surface of the eyeglasses; an intermediate connecting member configured to provide a connection between the first housing and the second housing; a second connecting member connected to the first housing such that the first housing is connected to the second housing in a collapsible manner; and a connection assembly having a connecting part which is configured to be connected to the second connecting member and is connected to the second housing, characterized in that at least one of the first connecting member and the second connecting member comprises a magnet, the other one is configured to be magnetically connected to the magnet, at least one of said first connecting member and said second connecting member is configured to protrude from the corresponding surface to which it is connected.

According to an embodiment of the invention, the first housing and the second housing comprise a substantially planar form. According to an embodiment of the invention, at least one of the first housing and the second housing at least partially includes a metal part. According to an embodiment of the invention, at least one of the first connecting member or said second connecting member includes two mutually extending inclined surfaces conforming to the form of the nose pads of a pair of glasses. According to an embodiment of the invention, one of the first housing or second housing is shorter in the longitudinal direction than the other. According to an embodiment of the invention, at least one of the first housing and the second housing includes an aperture. According to an embodiment

of the invention, the case for eyeglasses is configured to be capable of being charged wirelessly.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a representative front view of a case for eyeglasses according to the invention in a closed position.

Figure 2 is a representative rear view of a case for eyeglasses according to the invention in a closed position.

Figure 3 is a representative left view of a case for eyeglasses according to the invention in a closed position.

Figure 4 is an isometric representative rear view of a case for eyeglasses according to the invention in a closed position.

Figure 5 is an isometric representative front view of a case for eyeglasses according to the invention in a closed position.

Figure 6 is a representative front view of a case for eyeglasses according to the invention in an open position.

Figure 7 is a representative rear view of a case for eyeglasses according to the invention in an open position.

Figure 8 is a representative left view of a case for eyeglasses according to the invention in an open position.

Figure 9 is an isometric representative rear view of a case for eyeglasses according to the invention in an open position.

Figure 10 is a representative side view of a case for eyeglasses according to the invention in a two-piece configuration.

Figure 11 is a view of an alternative embodiment of the embodiment in figure 10.

Figure 12 is a view of an alternative embodiment of the embodiment in figure 10.

DESCRIPTION OF THE PARTS IN THE DRAWINGS

1	Case for eyeglasses
2	First housing
3	Second housing
4	Intermediate connecting member
5	Detachable part
6	First connecting part
7	Second connecting part
8	Upper support
9	Lower support
10	Inclined surface
11	Magnet
12	Upper part
13	Lower part
14	Joining edge
15	Connecting line

DETAILED DESCRIPTION OF THE INVENTION

A case (1) for eyeglasses according to the invention comprises a first housing (2) and a second housing (3) connected thereto via an intermediate connecting member (4). According to a first embodiment of the invention, the first housing (2) and the second housing (3) comprise a substantially flat and planar form. An external surface of the first housing (2) may be provided with an upper support (8) and similarly, an external surface of the second housing (3) may be provided with a lower support (9). Said supports (8, 9) may be made of materials suitable for their purpose which are known in the art and are capable of absorbing external impacts, such as silicone, rubber, etc.

The first housing (2) and the second housing (3) may be made of a reasonably resistant and flexible material known in the art and suitable for its purpose. Both the first housing (2) and the second housing (3) are possible to be coated with an appropriate material such as artificial leather, natural leather or a plastic material of synthetic or natural origin.

Similarly, the upper support (8) and the lower support (9) may be coated together with the housings (2, 3) analogously.

An intermediate connecting member (4) may be connected to the first housing (2) and the second housing (3) along two opposite longitudinal sides thereof via various ways (for example, an adhesive, ultrasonic welding, etc.) but it may also be made of a material which may be continuous with that coating material in case that the housings (2, 3) are coated as mentioned above. The intermediate connecting member (4) is made of a material sufficiently flexible to enable the first housing (2) to be closed and opened relative to the second housing (3).

According to an embodiment of the invention, the first housing (2), the second housing (3) and the intermediate connecting member (4) may be integral. Thus, two integral parts may be joined together as seen in figure 10. For example, an arrangement may be made such that the first integral part, an upper part (12) and the second integral part define a lower part (13). The upper part (12) and the lower part (13) may be joined along the joining edges indicated by "14" in both parts (i.e. preferably along all edges of each part (12, 13)). This joining may be accomplished by a variety of methods known in the art, depending on the material of the parts (12, 13). For example, if the parts (12, 13) are made of artificial leather, the joining process may be accomplished by the heat formed as a result of the ultrasonic frequency application. In addition, the joining process may also be applied to the region where the intermediate connecting member (4) is located.

As seen in Figure 10, before the upper part (12) and the lower part (13) are joined, the supports (8, 9) may be placed over the upper surface of the lower part (13), and thereafter, the joining of the parts (12, 13) may be carried out.

According to an embodiment of the invention, one of the upper part (12) or lower part (13) may be integral, and the other one may be formed of a two-piece structure. Figure 11 shows an arrangement in which the upper part (12) consists of one piece and the lower part (13) consists of two individual parts. According to an alternative embodiment, Figure 12 shows an arrangement in which the upper part (12) is made of two individual parts and the lower part (13) is integral.

According to an embodiment of the invention, the second housing (3) may comprise a detachable part (5) configured to be detached therefrom. This detachable part (5) may be

particularly useful if the case for eyeglasses (1) is detachably attached to a rear surface of a mobile device such as a smartphone/mobile phone, i.e. it may be on one side of the case. In such a case, in the event that the detachable part (5) is cut/removed from the second housing (and the first housing is open), the back camera of the phone will take picture. The connection of the detachable part (5) with the second housing (3) may be terminated using various ways. For example, detaching process may be achieved by cutting or tearing the pre-formed tear lines (e.g. perforated regions) using hand, etc. In addition, it is possible to bend the detachable part using hands so as to reveal the front camera and then, to restore the same to its original state when the photo shoot is completed as the detachable part may have a soft structure. Likewise, the second housing (3) may also include an aperture arranged to correspond to the back camera of the phone, in place of the detachable part (5). Similarly, the first housing (2) may also include an aperture arranged to correspond to the back camera of the phone and the aperture in the second housing (3), in place of the detachable part (5).

According to an alternative embodiment, the detachable part (5) may not be arranged so as to be completely "detached" from the second housing (3). For example, it may be connected to the second housing (3) such that it may be folded over a connecting line (15).

According to an embodiment of the invention, the second housing (3) includes a first connecting part (6) on the inner surface thereof, and similarly, the first housing (2) includes a second connecting part (7) on the inner surface thereof. The first connecting part (6) and the second connecting part (7) are arranged on the respective housings so that they are aligned with each other when the housings (2, 3) are closed. The first connecting part (6) may be in the form of a protrusion such that it extends outwardly from the inner surface of the second housing (3). Alternatively, the second connecting part (7) may be in the form of a protrusion such that it extends outwardly from the inner surface of the first housing (2). Or, both connecting parts (6, 7) may include a form that extends at least partially from the inner surfaces of the respective housings thereof. The first connecting part may be made of various materials, such as plastic or silicone.

The first connecting part (6) and the second connecting part (7) are configured such that a magnetic attraction force is generated therebetween. That is, the first connecting part (6) may include, for example, an N-pole magnet, while the second connecting part (7) may include an S-pole magnet. Alternatively, the first connecting part (6) may, for example,

comprise a magnet (11), while the second connecting part (7) may contain a metal (which may not contain a magnet), or the first connecting part (6) may, for example, comprise a metal (which may not contain a magnet), while the second connecting part (7) may comprise a magnet. In one embodiment of the invention, on the other hand, the first connecting part (6) may be arranged so as to be connected to the first housing (2), and the second connecting part (7) may be arranged so as to be connected to the second housing (3).

The first connecting part (6) and the second connecting part (7) are arranged so as to be away from the axis of the intermediate connecting member (4), substantially in the middle of the respective housings and at a location close to the upper sides of the respective housings. According to an embodiment of the invention, the first connecting part (6) comprises two mutually extending inclined surfaces (10) as seen more clearly in figure 6. These inclined surfaces (10) are configured to conform to the form of the mutually inclined nose pads of the eyeglasses to be placed in the case (1).

According to an embodiment of the invention, the first housing (2) and/or the second housing (3) may have an additional metal part(s). These additional metal part or parts may be particularly useful for the eyeglasses, the frames of which comprise a magnet, to be fixed in position in the case, as disclosed in the applications TR 2019/06787 or TR 2019/06896 assigned to the applicant. Because the magnets that are connected to the frame of the eyeglasses create an attraction effect with the metal parts or parts in the housings of the cases. The additional part or parts contained in the first housing (2) and/or second housing (3) may be connected to the various portions of the respective housing. For example, the additional metal parts may be provided to cover substantially the entire inner surface of the first housing (2) and/or the second housing (3). Alternatively, it may be provided at a location close to only certain parts of the inner surfaces of the respective housing and/or housings, e.g. close to the curved sides as seen in the figures, and/or at a location close to the first connecting part (6) and/or second connecting part (7). As an another alternative, the above-mentioned upper support (8) and lower support (9) may be made of a metal.

According to an embodiment of the invention, a case (1) for the eyeglasses may be equipped with an induction coil so as to wirelessly charge the mobile devices. The induction coil may have an input known in the art, which may receive electricity from an external power source such as a mains. The induction coil may preferably be connected

to the first housing (2) or the second housing (3) and may be configured to be on the outermost side of the respective housing. The external surface of the induction coil may be protected using a sufficiently resistant material, such as plastic, etc.

5

CLAIMS

1. A case (1) for eyeglasses comprising a first housing (2) configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing (3) configured to enclose a rear surface of the eyeglasses; an intermediate connecting member (4) configured to provide a connection between the first housing (2) and the second housing (3); a second connecting member (7) connected to the first housing (2) such that the first housing (2) is connected to the second housing (3) in a collapsible manner; and a connection assembly having a connecting part (6) which is configured to be connected to the second connecting member (7) and is connected to the second housing (3), characterized in that at least one of the first connecting member (6) and the second connecting member (7) comprises a magnet, the other one is configured to be magnetically connected to the magnet, at least one of said first connecting member (6) or said second connecting member (7) is configured to protrude from the corresponding surface to which it is connected.

2. A case for eyeglasses according to claim 1, characterized in that the first connecting part (6) has a magnet with a certain pole, and the second connecting part (7) has a magnet with an opposite pole.

3. A case for eyeglasses according to claim 1, characterized in that the first connecting part (6) comprises a magnet, and the second connecting part (7) comprises a metal without a magnet.

4. A case for eyeglasses according to claim 1, characterized in that the first connecting part (6) comprises a metal without a magnet, and the second connecting part (7) comprises a magnet.

5. A case for eyeglasses according to any one of the preceding claims, characterized in that the first connecting part (6) comprises two mutually inclined surfaces (10).

6. A case for eyeglasses according to claim 5, characterized in that the second connecting part (7) comprises two mutually inclined surfaces.

7. A case for eyeglasses according to any one of the preceding claims, characterized in that the first housing (2) and/or the second housing (3) comprise at least one metal part.

8. A case for eyeglasses according to claim 7, characterized in that said at least one metal part is provided so as to cover substantially the entire inner surface of the first housing (2) and/or the second housing (3).

9. A case for eyeglasses according to any one of the preceding claims, characterized in that at least one of the first housing (2) and/or the second housing (3) comprise an aperture.

10. A case for eyeglasses according to any one of the preceding claims, characterized in that the first housing (2) and/or the second housing (3) comprise a part (5) which is detachable from the respective housing.

11. A case for eyeglasses according to claim 10, characterized in that said detachable part (5) is on one side of the case.

12. A case for eyeglasses according to claim 11, characterized in that the detachable part (5) is configured to remain connected to the respective housing and is folded over with respect to that housing.

13. A case for eyeglasses according to any one of the preceding claims, characterized in that it comprises an induction coil so as to wirelessly charge a mobile device.

14. A case for eyeglasses according to claim 13, characterized in that said induction coil is configured to be on the outermost side of the first housing (2) or the second housing (3).

15. A case (1) for eyeglasses comprising a first housing (2) configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing (3) configured to enclose a rear surface of the eyeglasses; an intermediate connecting member (4) configured to provide a connection between the first housing (2) and the second housing (3); a second connecting member (7) connected to the first housing (2) such that the first housing (2) is connected to the

second housing (3) in a collapsible manner; and a connection assembly having a connecting part (6) which is configured to be connected to the second connecting member (7) and is connected to the second housing (3), characterized in that it comprises an upper part (12) on which the first housing (2), the second housing (3) and the intermediate connecting member (4) are configured as an integral part; and a lower part (13) which has the same configuration and is connected to the upper part (12), wherein at least one of said first connecting part (6) and second connecting part (7) comprises a magnet, the other one is configured to be magnetically connected to the magnet, at least one of said first connecting member (6) and said second connecting member (7) is configured to protrude from the corresponding surface to which it is connected.

16. A case for eyeglasses according to claim 15, characterized in that the first connecting part (6) comprises a magnet with a certain pole, and the second connecting part (7) comprises a magnet with an opposite pole.

17. A case for eyeglasses according to claim 15, characterized in that the first connecting part (6) comprises a magnet, and the second connecting part (7) comprises a metal without a magnet.

18. A case for eyeglasses according to claim 15, characterized in that the first connecting part (6) comprises a metal without a magnet, and the second connecting part (7) comprises a magnet.

19. A case for eyeglasses according to any one of claims 15 to 18, characterized in that the first connecting part (6) has two mutually inclined surfaces (10).

20. A case for eyeglasses according to claim 19, characterized in that the second connecting part (7) has two mutually inclined surfaces.

21. A case for eyeglasses according to claims 15 to 20, characterized in that the first housing (2) and/or the second housing (3) comprise at least one metal part.

22. A case for eyeglasses according to claim 21, characterized in that said at least one metal part is provided such that it covers substantially the entire inner surface of the first housing (2) and/or the second housing (3).

23. A case for eyeglasses according to any one of claims 15 to 22, characterized in that the first housing (2) and/or the second housing (3) comprise an aperture.

24. A case for eyeglasses according to any one of claims 15 to 23, characterized in that the first housing (2) and/or the second housing (3) comprise a part (5) which is detachable from the respective housing.

25. A case for eyeglasses according to claim 24, characterized in that said detachable part (5) is on one side of the case.

26. A case for eyeglasses according to claim 25, characterized in that the detachable part (5) is configured to remain connected to the respective housing and is folded over with respect to that housing.

27. A case for eyeglasses according to any one of claims 15 to 26, characterized in that it comprises an induction coil so as to wirelessly charge a mobile device.

28. A case for eyeglasses according to claim 27, characterized in that said induction coil is configured to be on the outermost side of the first housing (2) or the second housing (3).

29. A case (1) for eyeglasses comprising a first housing (2) configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing (3) configured to enclose a rear surface of the eyeglasses; an intermediate connecting member (4) configured to provide a connection between the first housing (2) and the second housing (3); a second connecting member (7) connected to the first housing (2) such that the first housing (2) is connected to the second housing (3) in a collapsible manner; and a connection assembly having a connecting part (6) which is configured to be connected to the second connecting member (7) and is connected to the second housing (3), characterized in that it comprises an upper part (12) on which the first housing (2), the second housing (3) and the intermediate connecting member (4) are configured as an integral part; and a lower part (13) which comprises a first housing (2) and a second housing (2) separate therefrom and is connected to the upper part (12), wherein at least one of said first connecting part (6) and second connecting part (7) comprises a magnet, the

other one is configured to be magnetically connected to the magnet, at least one of said first connecting member (6) or said second connecting member (7) is configured to protrude from the corresponding surface to which it is connected.

30. A case (1) for eyeglasses comprising a first housing (2) configured to enclose a front surface of eyeglasses when the temples are folded or when the glasses have no temples; a second housing (3) configured to enclose a rear surface of the eyeglasses; an intermediate connecting member (4) configured to provide a connection between the first housing (2) and the second housing (3); a second connecting member (7) connected to the first housing (2) such that the first housing (2) is connected to the second housing (3) in a collapsible manner; and a connection assembly having a connecting part (6) which is configured to be connected to the second connecting member (7) and is connected to the second housing (3), characterized in that it comprises a lower part (12) on which the first housing (2), the second housing (3) and the intermediate connecting member (4) are configured as an integral part; and an upper part (12) which comprises a first housing (2) and a second housing (2) separate therefrom and is connected to the lower part (13), wherein at least one of said first connecting part (6) and second connecting part (7) comprises a magnet, the other one is configured to be magnetically connected to the magnet, at least one of said first connecting member (6) or said second connecting member (7) is configured to protrude from the corresponding surface to which it is connected.

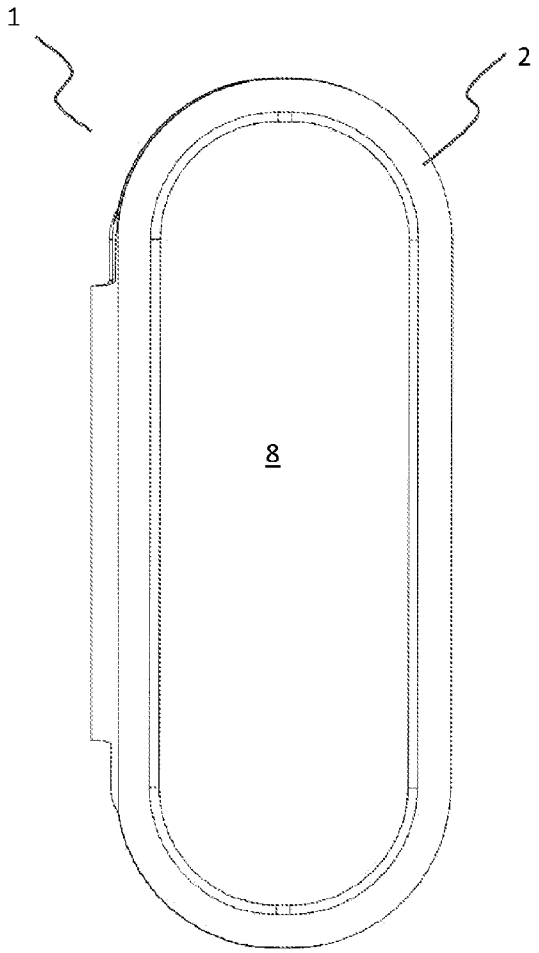

Fig. 1

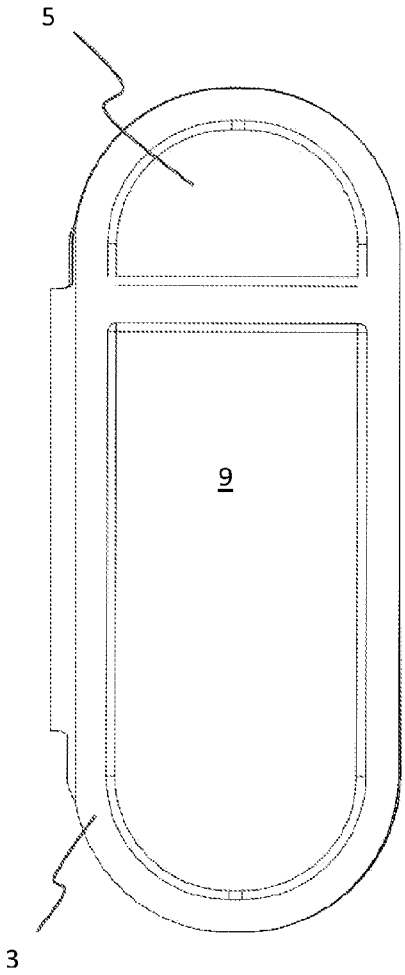

Fig. 2

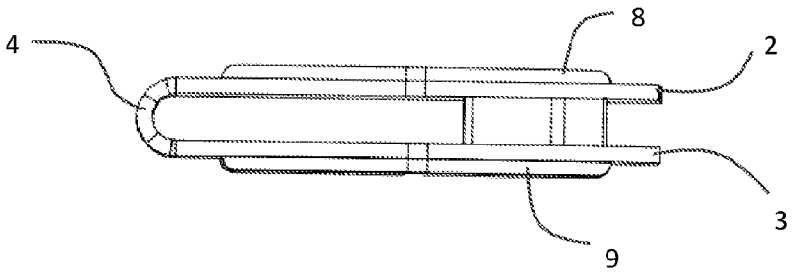

Fig. 3

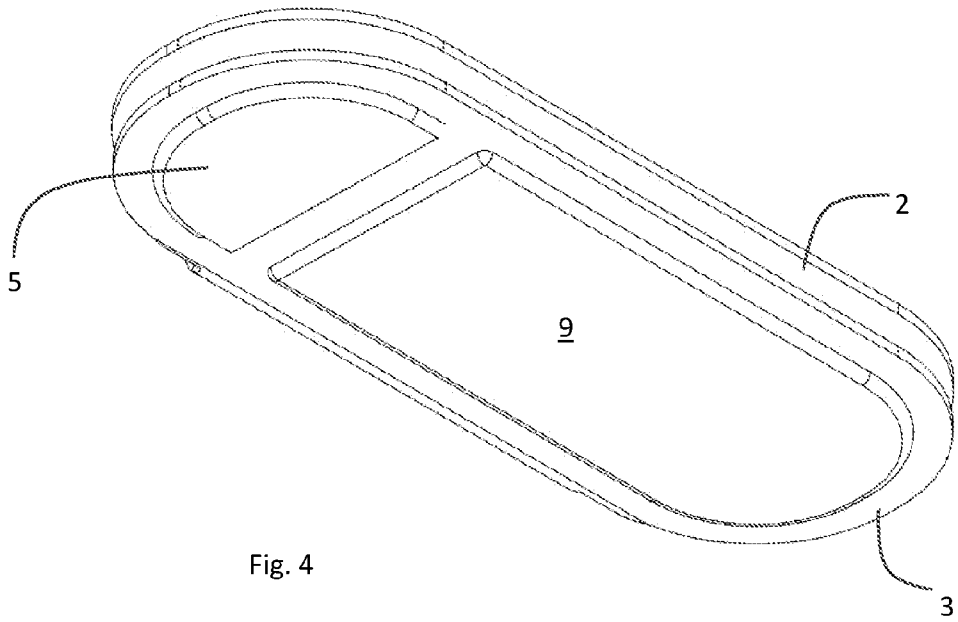

Fig. 4

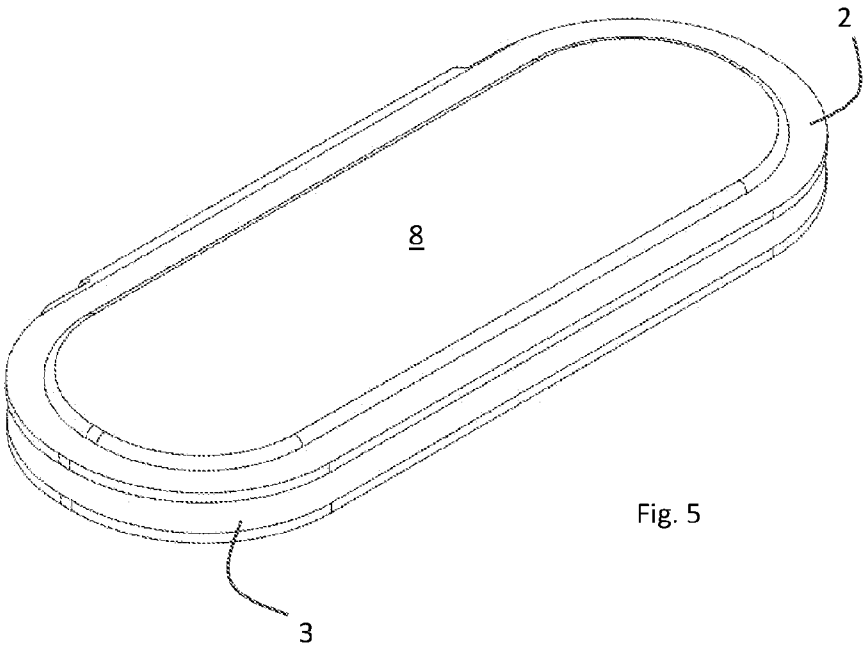

Fig. 5

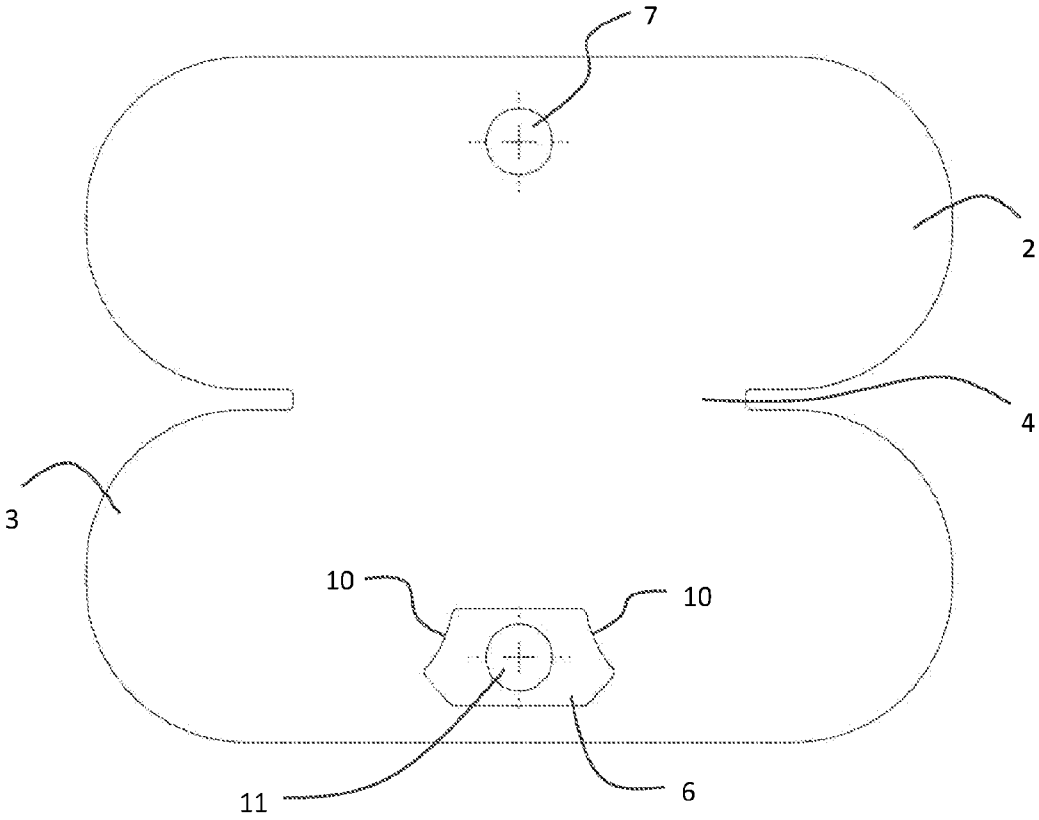

Fig. 6

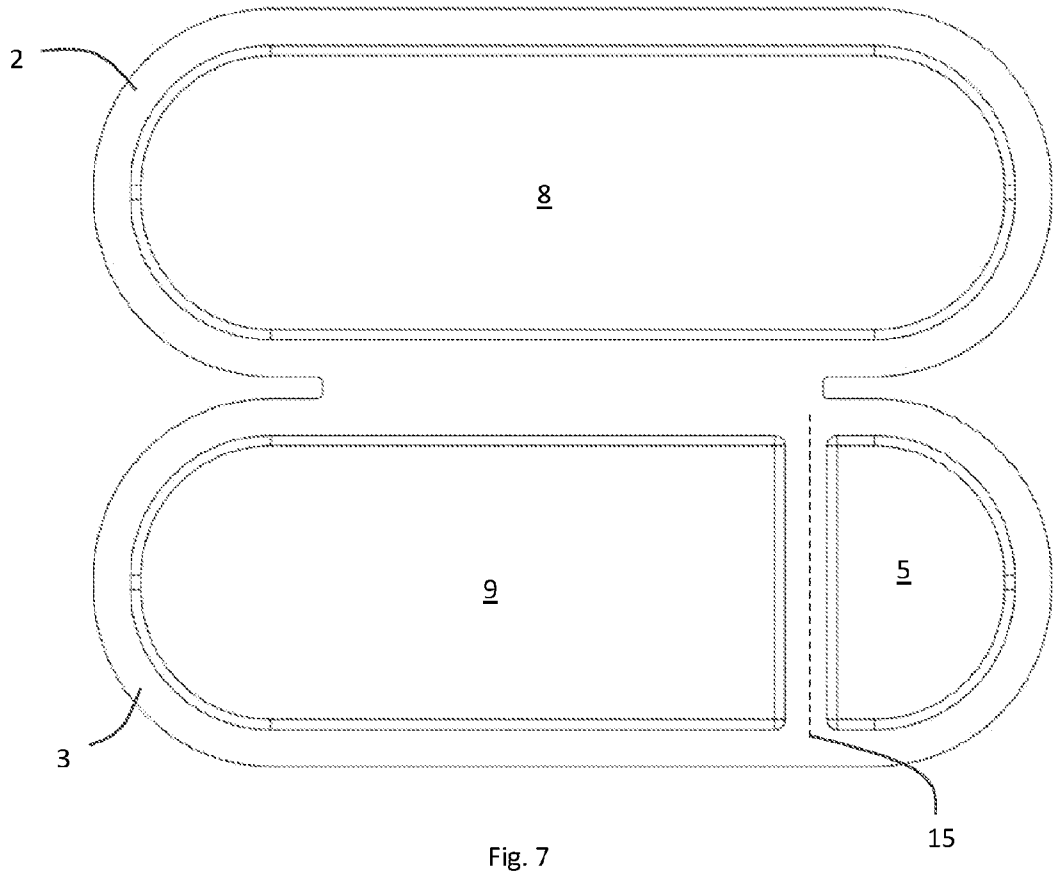

Fig. 7

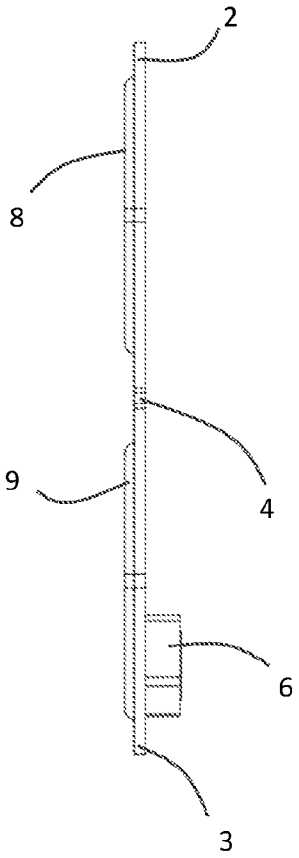

Fig. 8

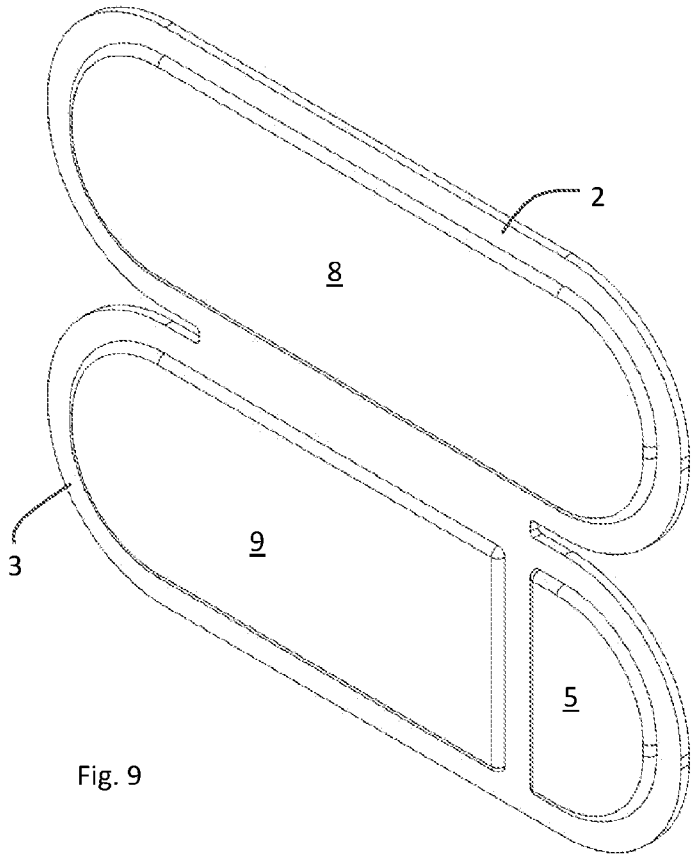

Fig. 9

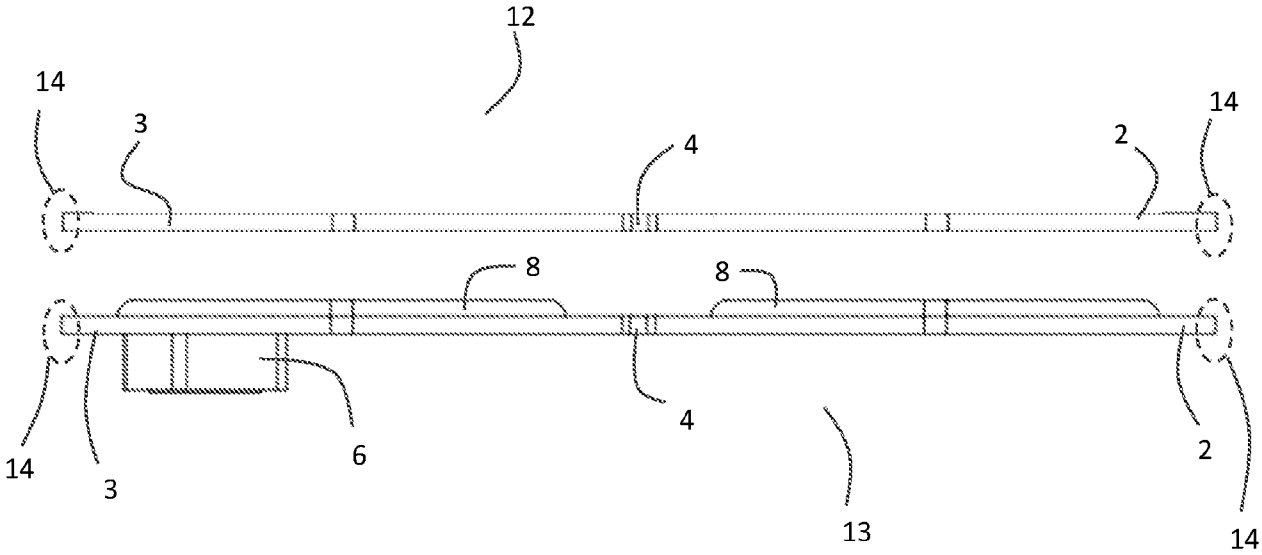

Fig. 10

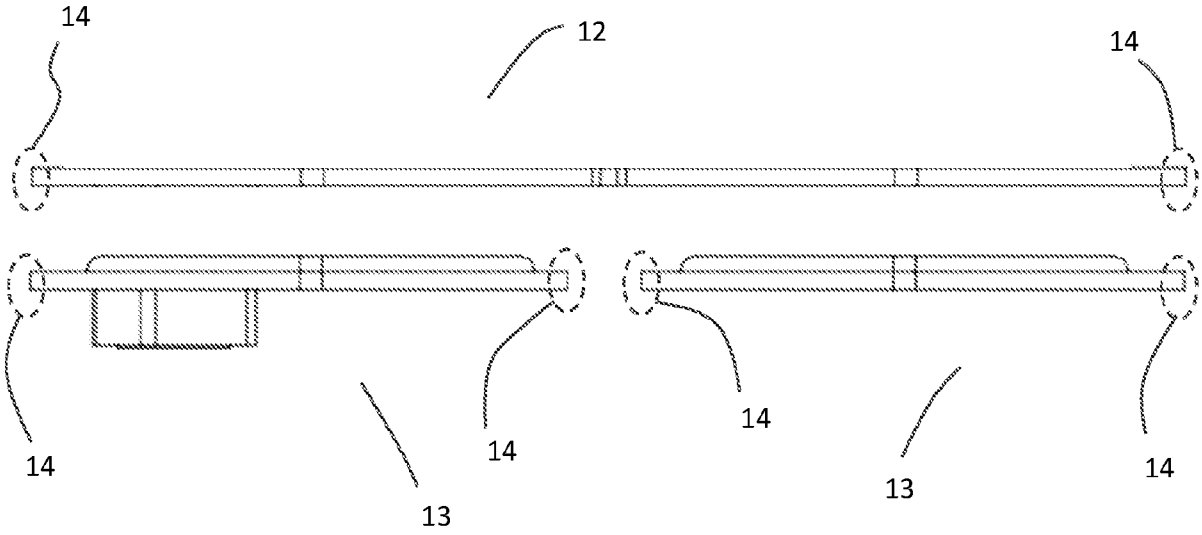

Fig. 11

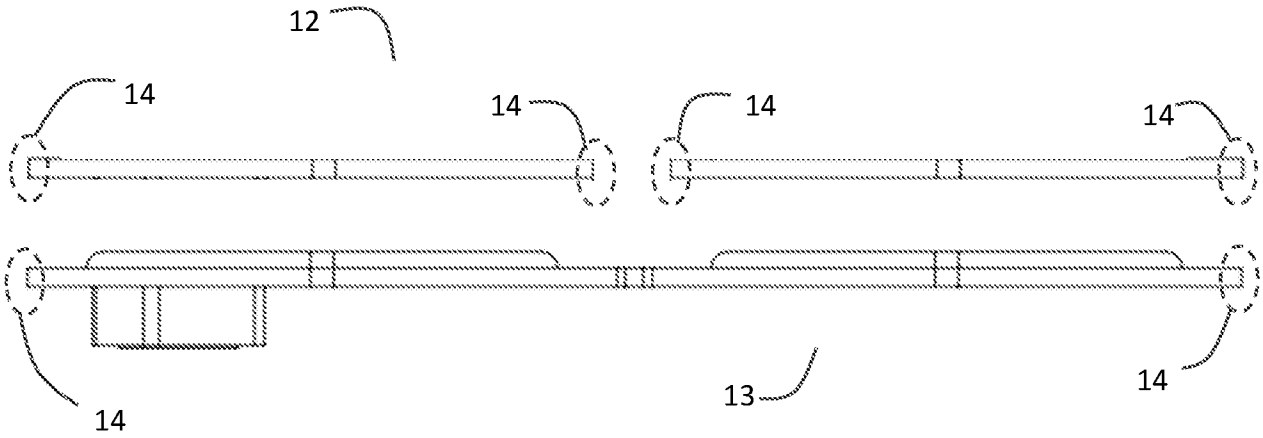

Fig. 12

INTERNATIONAL SEARCH REPORT

International application No.
PCT/TR2020/051015

A. CLASSIFICATION OF SUBJECT MATTER

A45C 11/04 (2006.01)i; A45C 15/00 (2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A45C 11/04; A45C 15/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 102334801 A (MEIHONG YANG) 01 February 2012 (2012-02-01) All document	1-30
A	CN 207613350 U (LEI YUJIN) 17 July 2018 (2018-07-17) All document	1-30
A	CN 106617588 A (HUANG QIANMING) 10 May 2017 (2017-05-10) All document	1-30

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search	Date of mailing of the international search report
10 February 2021	**10 February 2021**

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