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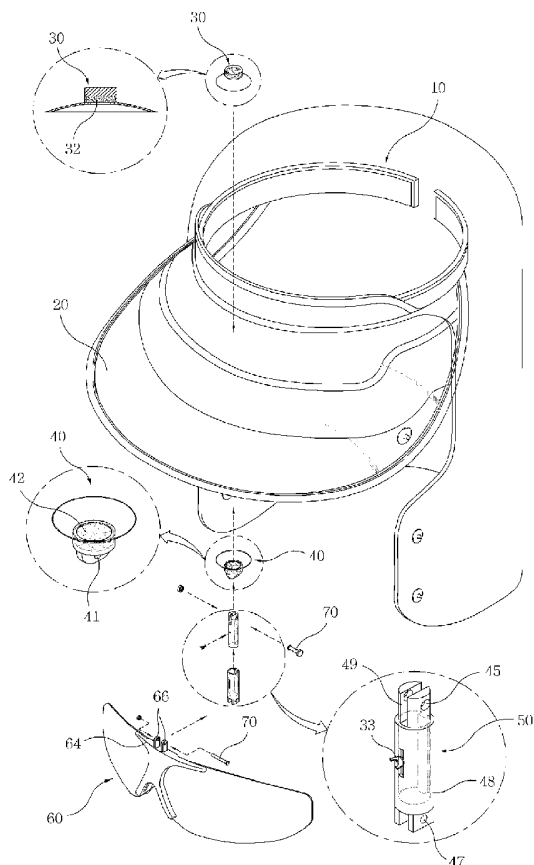
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(54) Title: SUNGLASSES THAT STICK TO THE SUN CAP



(57) Abstract: The present invention relates to sunglasses that are designed not to be worn directly on the user's face, thus enabling the user to avoid the discomfort normally associated with the use of conventional sunglasses. Also, the sunglasses position is adjustable to the user's eye level regardless of the size of the sun cap and are easy to attach and detach, because the sunglasses are equipped with an upper rubber absorption member (30) having a ferromagnetic element (32) which is attachable or detachable at the upper surface of the visor (20) of the sun cap (10), and equipped with a lower rubber absorption member (40) comprising a ferromagnetic element (42) in the inner central portion to be attached to or detached from the bottom surface of the visor (20) facing the upper rubber absorption member (30), equipped with a length-variable member (50) connected to the lower rubber absorption member (40), and connected to the lower end portion of the length-variable member (50) so as to be folded upward. (Figures) Figure 2 (Index words) the length-variable member of the sunglasses, ferromagnetic element

## Description

### SUNGLASSES THAT STICK TO THE SUN CAP

#### Technical Field

- [1] The present invention relates to sunglasses for a sun cap; more specifically, sunglasses that are not worn directly on the face, thus enabling the user to avoid the discomfort caused by glasses pressing on the face, and are adjustable to the eye level regardless of the size of a sun cap, and are easily detachable.

[2]

#### Background Art

- [3] Generally, conventional sun caps have the function only of blocking sunlight in order to protect a user from ultraviolet rays.

[4]

- [5] As can be seen in Figure 1 on a conventional sun cap of prior art, a cap such as the sun cap (10) is able to block the light coming from above, but cannot block glare caused by refraction or reflection of light from the surface of streets or sea waves, and thus a user often ends up purchasing expensive sunglasses (2), etc.

[6]

- [7] However, when wearing sunglasses (2), the user often feels discomfort because of the pressure of sunglasses pressing on the nose and the ears, and thus cannot wear them for a long time, and for this reason, sunglasses do not serve their purpose.

[8]

- [9] Recently, to solve this problem, sunglasses attached to a sun cap have been introduced into the market.

[10]

- [11] However, the sunglasses attached to a sun cap currently available in the market are also limited in function, in that the sunglasses are not easily adjustable to the user's eye level when the user puts on the sun cap with the sunglasses. Also, even though the sunglasses can be folded against the bottom surface of the visor when not used, the folded sunglasses still blocks the wearer's vision, thus causing the user considerable discomfort when walking.

[12]

#### Disclosure of Invention

##### Technical Problem

- [13] (Detailed Description of The Invention)
- [14] (Technical Subject Matter to Solve)
- [15] The present invention was designed in light of the problems of prior art described

above, and it is an object of the present invention to provide sunglasses for a sun cap which allow a user to wear glasses free from discomfort by not putting the sunglasses directly on the user's face, and are adjustable to the eye level of a user regardless of the size of a sun cap and easily detachable from a sun cap.

[16]

### **Technical Solution**

[17]

In order to achieve this objective, sunglasses for a sun cap according to the present invention have a constitution comprising: an upper rubber absorption member (30) having a ferromagnetic element (32) attached to or detached from an upper surface of a visor (20) of the sun cap; a lower rubber absorption member (40) attached to or detached from a bottom surface of the visor (20) opposite to the upper rubber absorption member (30) and having in its inner central portion a ferromagnetic element (42) attracting the ferromagnetic element (32) of the upper rubber absorption member (30); a foldable length-variable member (50), connected at its upper end portion to the lower end portion of the lower rubber absorption member (40); and sunglasses (60) connected to the lower end portion of the length-variable member (50) so that the sunglasses may be turned forward.

[18]

[19]

The constitution of the sunglasses of the present invention can be explained in detail as below:

[20]

[21]

The present invention comprises: an upper rubber absorption member (30) which is attached to the upper surface of a visor (20) of a sun cap (10) and has a ferromagnetic element (32) in its inner central portion; a lower rubber absorption member (40) which has in its inner central portion a ferromagnetic element (42) attracting the ferromagnetic element (32) of said upper rubber absorption member (30); a length-variable member (50) consisting of a guide member (48) and a sliding rod (49) for a length adjustment, which is formed at the lower end portion of said lower rubber absorption member (40) and to which a pair of sunglasses (60) is attached.

[22]

[23]

The ferromagnetic element (32) is attracted to the other ferromagnetic element (42) of the lower rubber absorption member (40) by the magnetism, thereby more strongly attracting the lower rubber absorption member (40).

[24]

[25]

A pair of sunglasses (60) is integrally attached to the lower end portion of the guide member (48) so that the vertical position of the sunglasses can be adjusted by the guide member (48) sliding up and down along the sliding rod (49).

[26]

### **Advantageous Effects**

[27] The present invention enables a user to avoid the discomfort of wearing sunglasses on the face because the sunglasses of the present invention are designed not to be worn directly on the face. Further, the sunglasses are length-variable and thus can be adjusted to the user's eye level regardless of the size of a sun cap, making the sunglasses easy to attach and detach.

[28]

### **Brief Description of the Drawings**

[29] Figure 1 is a perspective view of a conventional sun cap of prior art.

[30] Figure 2 is a perspective view of the sunglasses for a sun cap according to the present invention taken apart.

[31] Figure 3 is a perspective view of the assembled sunglasses for a sun cap according to the present invention.

[32] Figure 4 is a perspective view of the sunglasses for a sun cap according to the present invention in use.

[33] Figure 5 is a perspective view of the sunglasses for a sun cap according to the present invention folded.

[34] Figure 6 is a perspective view of another embodiment of the sunglasses for a sun cap according to the present invention folded twice.

[35] Figure 7 is a perspective view of another embodiment of the length-variable member of the sunglasses for a sun cap according to the present invention.

[36]

### **Best Mode for Carrying Out the Invention**

[37] A detailed explanation of Embodiments of the sunglasses for a sun cap according to the present invention is as follows:

[38]

[39] Figure 2 shows the sunglasses for a sun cap taken apart; Figure 3 shows the assembled sunglasses for a sun cap; Figure 4 shows the sunglasses for a sun cap in use; Figure 5 shows the sunglasses for a sun cap folded; Figure 6 shows another embodiment of the sunglasses for a sun cap folded twice; and Figure 7 shows another embodiment of the length-variable member of the sunglasses for a sun cap.

[40]

[41] In a preferred embodiment, as shown in Figures 2, 3, and 4, when a user in a sun cap (10) encounters difficulty in walking due to the reflection of sunlight coming from the surface of the street or from a building directly into the user's eyes, the user lightly presses the bottom of the visor (20) of the sun cap (10), causing air to leak out of the

inside of the lower rubber absorption member (40) and creating an airtight seal in the space between the lower rubber absorption member (40) and the bottom surface of the visor (20), thus bringing the lower rubber absorption member to the bottom surface of the visor. That is, when the lower rubber absorption member (40) is pushed onto the bottom surface of the visor (20), the lower rubber absorption member (40) pushes onto the bottom surface of the visor (20), through which air in the center of the inside of the lower rubber absorption member (40) leaks out, creating an airtight seal and bringing the lower rubber absorption member to the bottom surface of the visor.

[42] As indicated above, the elasticity or adhesion of the lower rubber absorption member (40) adhered to the bottom surface of the visor (20) weakens over time, causing the air compression of the inside to drop.

[43]

[44] Accordingly, in order to prevent the rubber absorption member (40) from falling off the surface of the visor (20), a ferromagnetic element (42) is integrally placed in the inside of the lower rubber absorption member (40) to create double adhesion.

[45]

[46] Although the present invention merely explains that ferromagnetic elements (32, 42) are formed within the lower rubber absorption member (40) and the upper rubber absorption member (30), it is also possible to attach the lower rubber absorption member (40) to the visor by using the ferromagnetic elements alone.

[47]

[48] As mentioned above, the ferromagnetic (42) formed integrally in the lower rubber absorption member (40) and attached to the bottom surface of the visor (20), is placed facing the other ferromagnetic element (32) formed at the upper surface of the visor.

[49]

[50] When the upper rubber absorption member (30) is pressed and adhered to the upper surface of the visor (20) of the sun cap (10), the ferromagnetic element (32), integrally placed in the upper rubber absorption member (30), and the ferromagnetic element (42), integrally placed in the lower rubber absorption member (40) at its lower end portion, attract each other to stick together.

[51]

[52] Separated by the visor (20) of the sun cap (10), the ferromagnetic elements (32 and 42), which adhere to each other by a strong magnetic power, will not be separated unless they are pulled apart by an external force.

[53]

[54] That is, the upper rubber absorption member (30) strengthens the adhesion of the lower rubber absorption member (40) to the bottom surface of the visor (20) of the sun cap (10).

[55]

[56] Also, a length-variable member (50) is formed at the lower end portion of the lower rubber absorption member (40). This length-variable member (50) is length adjustable by the sliding rod (49) sliding up and down along the inside of the guide member (48) provided integrally at the lower end portion.

[57]

[58] Said length-variable member (50) and said lower rubber absorption member (40) are connected by a connector (70) after the hole (41) formed at the lower end portion of said lower rubber absorption member (40) is aligned with the hole (45) formed at the upper portion of said sliding rod (49).

[59]

[60] A hooking protrusion (not shown) is provided in the bore of said guide member (48). The sliding rod (49) is connected with said hooking protrusion so that the sliding rod can be pulled up or pushed back in.

[61]

[62] Also, it is possible to provide a hole to the guide member and the sliding rod and fasten the guide member to the sliding rod with a U-shaped fastening screw (33), etc. so as to fix the position.

[63]

[64] Further, the fastening screw (33) is configured so that the sliding rod (49) will not fall off from the guide member (48).

[65]

[66] The length-variable member (50), as constituted above, comprises the sliding rod (49), which can be pulled up and inserted back into the guide member (48), and a pair of sunglasses (60) are attached to the end portion of the sliding rod so as to be adjustable to a user's eye level.

[67]

[68] A hole (47) is formed at the lower end portion of said guide member (48), and a pair of U-shaped connecting brackets (66) is formed on the upper end portion of the sunglasses (60), and the connecting brackets and the hole are pivotally connected by a connector (70).

[69]

[70] A projection line is formed along the bore of the guide member (48) of said length-variable member (50), and a groove is formed along the sliding rod (49) so that the projection line can fit into it; accordingly, the guide member (48) moves vertically only without rotating.

[71]

[72] The pair of U-shaped connecting brackets (66) formed on the upper end part of the

frame member (48) of said sunglasses (60) is configured so that the brackets can smoothly rotate with their holes fit with the holes (47) of the guide member (48).

[73]

[74] Also, the sunglasses attached to the lower end portion of the length-variable member (50), when not in use, can be folded upward. That is, the sunglasses (60) can be folded upward due to the constitution wherein the hole (41) at the lower end portion of the lower rubber absorption member (40) is aligned with the hole (45) at the upper portion of the sliding rod (49) and then a connector (70) pivotally connects the holes together.

[75]

[76] Thus, as illustrated in Figure 5, a user can fold the sunglasses forward against the bottom surface of the visor (20).

[77]

[78] Said connector (70) may be a small bolt with a nut, or any usual fastening member.

[79]

[80] When the sunglasses (60) of the present invention are not used, and a user wants to separate the sunglasses (60) from the visor (20), the user has only to detach the upper rubber absorption member (40) from the visor (20), and then the lower rubber absorption member (40), adhered to the bottom surface of the visor (20), is detached, and then the ferromagnetic element (42) placed in the inner central portion of the lower rubber absorption member (40) loses the attraction of the other ferromagnetic element and thus falls off easily.

[81]

[82] The sunglasses (60) connected to the visor (20) of the sun cap (10) may be completely detached from the sun cap to be kept separately, and when needed, can be reattached. In particular, because the user does not have to wear the sunglasses directly on his/her face, the invention allows a user to wear the sunglasses for a long period without experiencing the discomfort caused by the sunglasses pressing on the face.

[83]

[84] In particular, the present invention allows the user to easily attach the sunglasses (60) to the visor (20) by means of the ferromagnetic elements (32, 42) of the upper rubber absorption member (30) and the lower rubber absorption member (40). Also, the user may adjust the sunglasses position to the user's eye level by moving them to and fro along the surface of the visor (20) of the sun cap (10).

[85]

[86] Another example of the length-variable member (50) of the present invention is explained below:

[87]

[88] As illustrated in Figure 7, the length-variable member (50) comprises a length-variable rod (52) telescopically interference-fit in a fix rod (51) so that its length can be adjusted only when an external force is applied to pull it up like the antenna of a radio.

[89]

[90] Thus, a user can adjust the position of the sunglasses (60) by pulling down the length-variable rod (52) from the fixed rod (51) or inserting it back into the fixed rod. Also, the position of the sunglasses, once adjusted, remains fixed.

[91]

[92] At the upper end portion of the length-variable member (50) is provided a couple of U-shaped connecting brackets and a small screw (69) to be pivotally connected with a hole at the lower end portion of the lower rubber absorption member (40) having a ferromagnetic element.

[93]

[94] Also, at the lower end portion of the length-variable member (50) is provided a U-shaped bracket to fit pivotally into the two parallelly placed U-shaped brackets (66) projecting from the upper end portion of the sunglasses (60), and a small screw (69) holds them in place, enabling the user to adjust the angle of the sunglasses.

[95]

[96] Thus, the U-shaped connecting brackets (62, 66) formed at the upper and lower end portions of the length-variable member (50) are configured to allow an easy folding, owing to the pivotal connection by the small screw (69).

[97]

[98] As demonstrated in Figure 6, the position of the sunglasses (60) of the present invention is easily adjusted by the length-variable member (50) of the length-variable rod (52) and the fixed rod (51); particularly, the sunglasses can be folded twice because the upper end portion and lower end portion of the length-variable member (50) can be folded at each joint.

[99]

[100] Thus, the sunglasses of the present invention are characterized in that by connecting both end portions of the length-variable members (50) of the length-variable rod (52) and the upper fixed rod (51) to the lower rubber absorption member (40) and the sunglasses, respectively, to allow an easy folding at each joint, a user can make himself/herself more comfortable by adjusting the sun cap when wearing it.

[101]

### **Industrial Applicability**

[102] The sunglasses of the present invention are characterized in that a user does not directly wear the sunglasses on his/her face, thereby avoiding the discomfort associated



with a prolonged use of conventional sunglasses and thus permitting the user to wear the glasses for a long time.

[103]

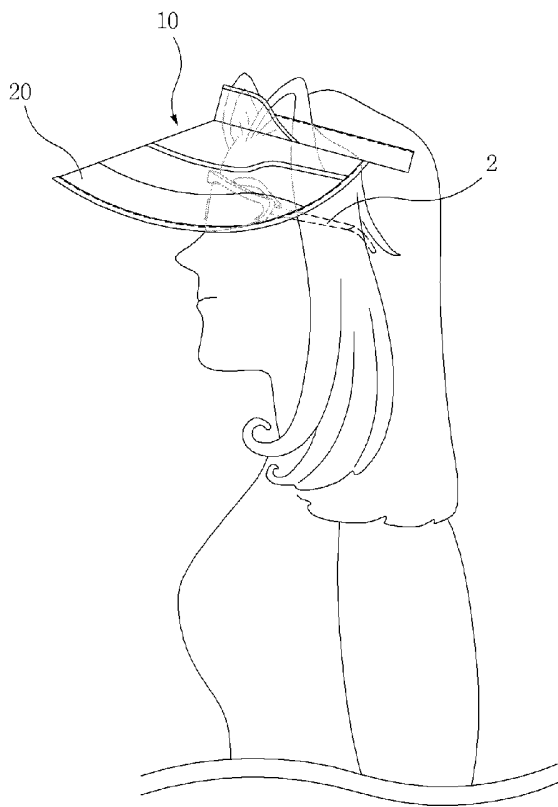
[104] Further, the length-variability and attachability and detachability of the sunglasses according to the invention give the wearer a variety of options for use.

[105]

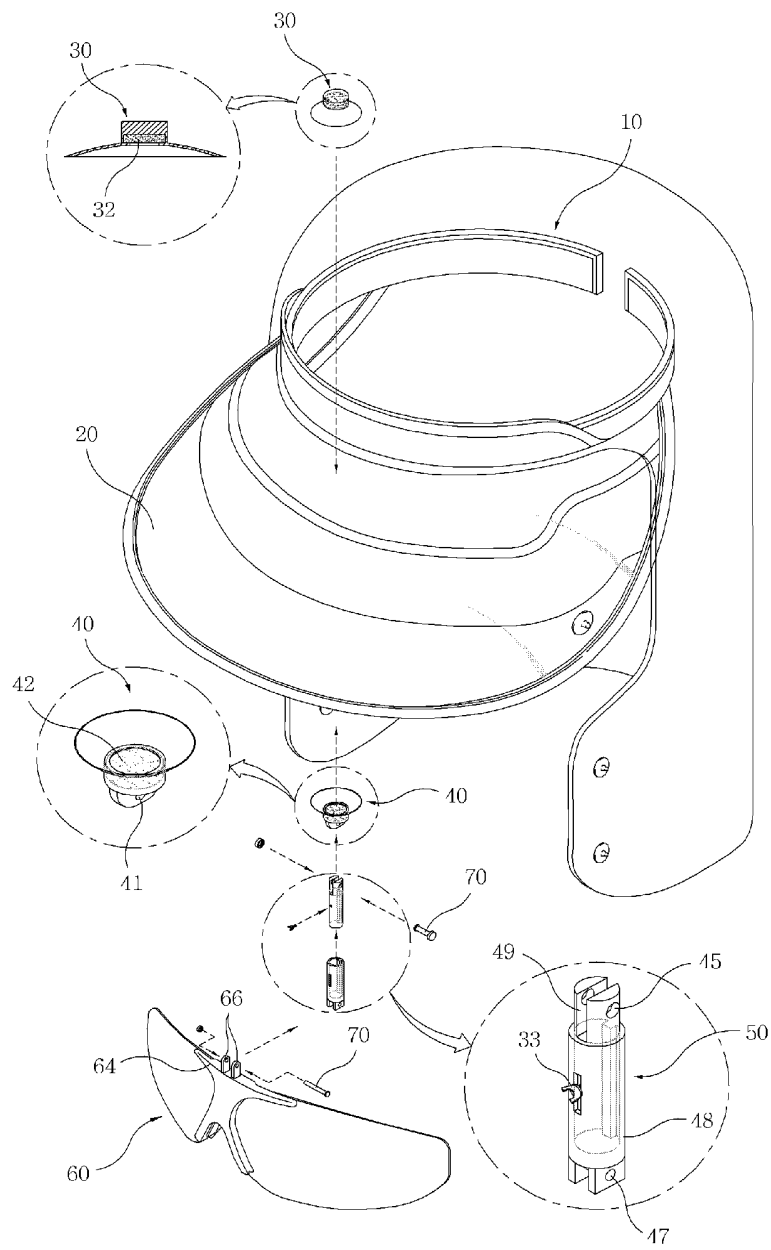
## Claims

- [1] Sunglasses for a sun cap comprising: an upper rubber absorption member (30) having a ferromagnetic element (32) and attached to or detached from an upper surface of a visor (20) of the sun cap; a lower rubber absorption member (40) attached to or detached from a bottom surface of the visor (20) opposite to the upper rubber absorption member (30) and having in its inner central portion a ferromagnetic element (42) attracting the ferromagnetic element (32) of the upper rubber absorption member (30); a foldable length-variable member (50) connected at its upper end portion to a lower end portion of the lower rubber absorption member (40); and sunglasses (60) connected to a lower end portion of the length-variable member (50) so that the sunglasses may be turned forward.
- [2] Sunglasses for a sun cap according to Claim 1, a sliding rod (49) is connected to the lower end portion of the lower rubber absorption member (40), a guide member (48) is connected at its lower end portion to the upper portion of the sunglasses (60) with the sliding rod (49) inserted in the guide member, and the length-variable member (50) is equipped with a fastening screw (33) which fastens the guide member (48) to the sliding rod (49) inserted therein.
- [3] Sunglasses for a sun cap according to Claim 1, the length-variable member (50) has length-variable rod (52) telescopically interference-fitted in a bore of an upper fixed rod (51).

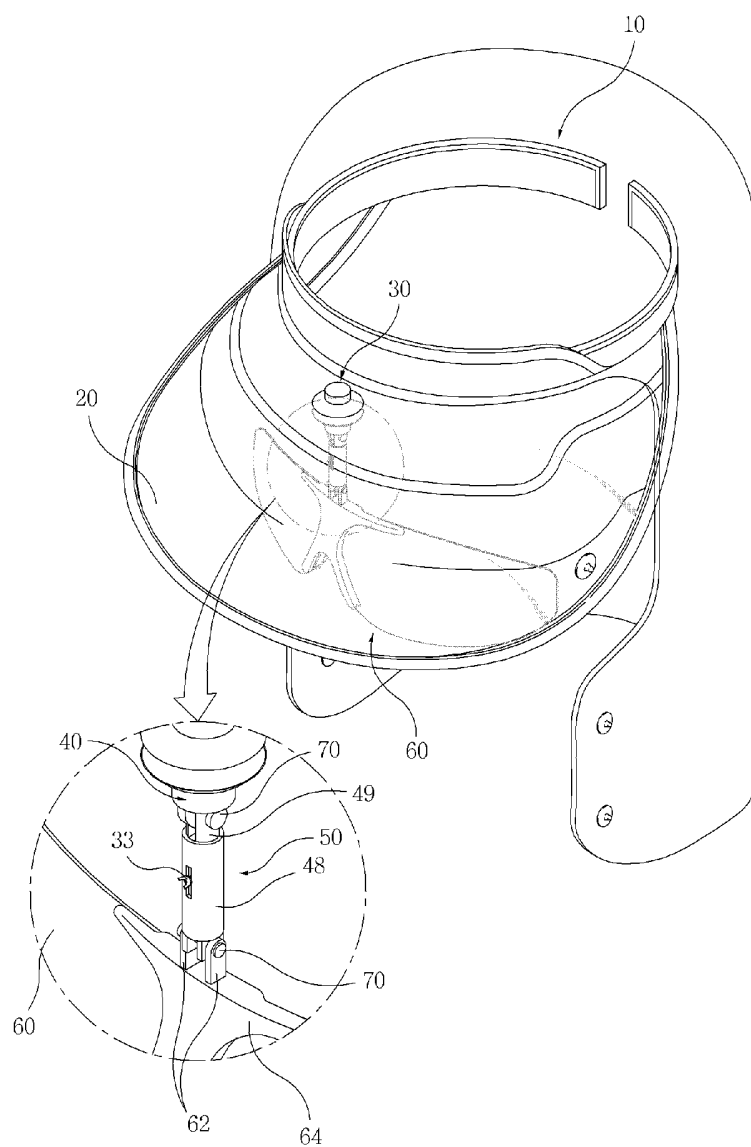
[Fig. 1]



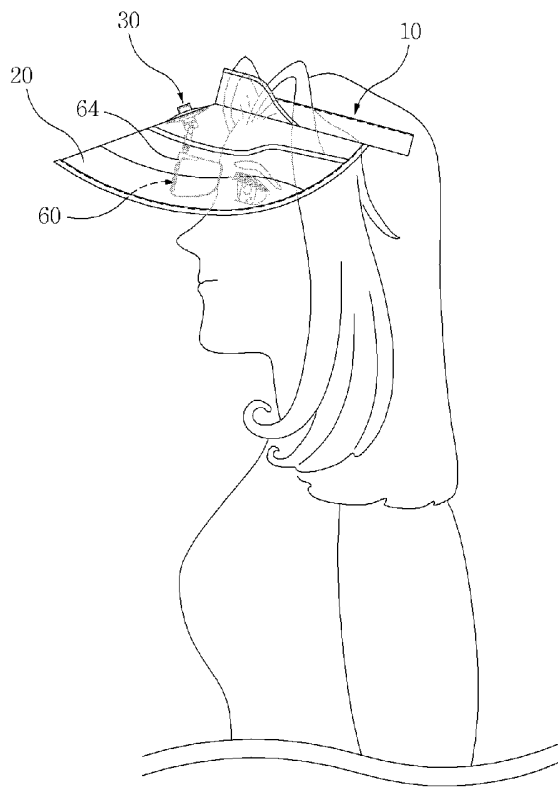
[Fig. 2]



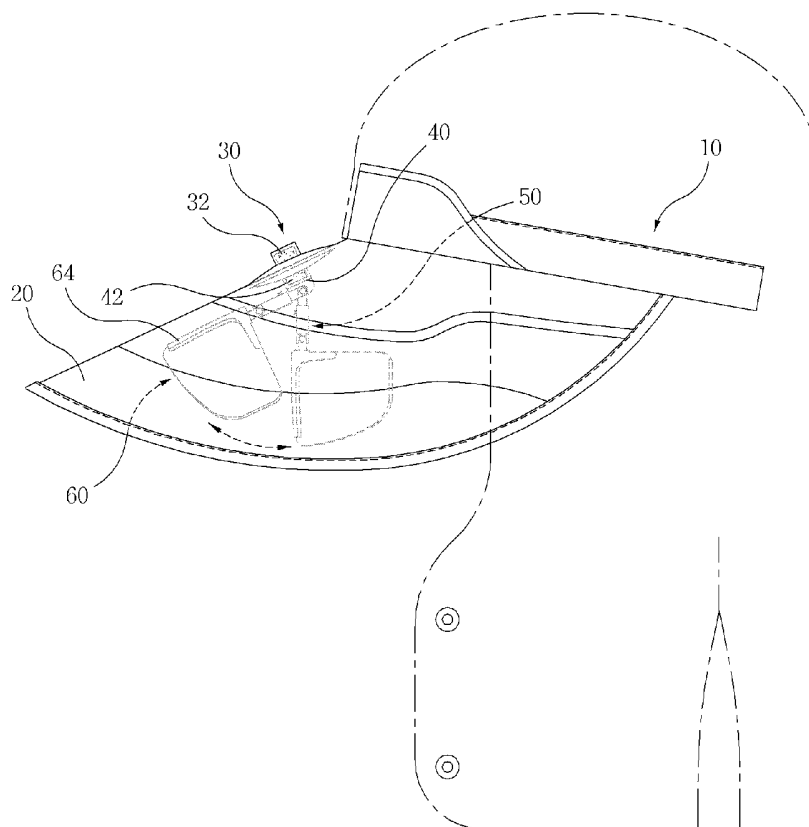
[Fig. 3]



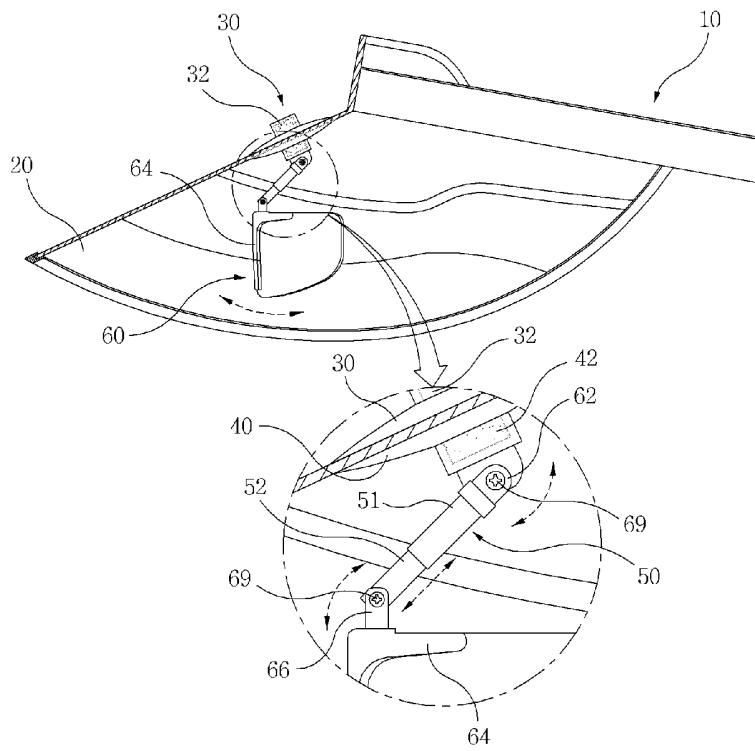
[Fig. 4]



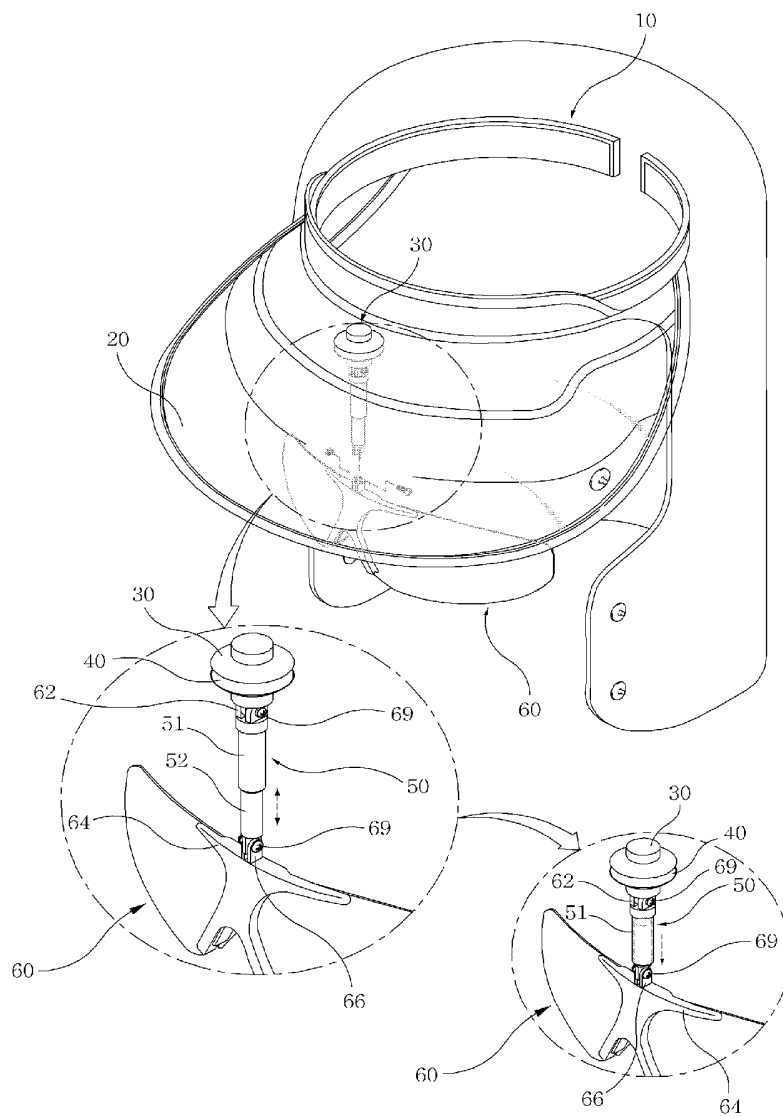
[Fig. 5]



[Fig. 6]



[Fig. 7]





## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2005/001923

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 A42B 1/24**

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)

IPC7 A42B

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

KR : IPC as above

JP (utility models) : IPC as above

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.
Y	KR 1988-0004039 Y1 (KIM, BYONG JAE) 18 NOVEMBER 1988 See the whole document	1-3
Y	KR 0302252 Y1 (YU-TENG HSIAO) 29 JANUARY 2003 See the whole document	1-3
A	US 5987640 A (RYDER, CURTIS J.) 23 NOVEMBER 1999 See the whole document	1-3
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A	JP 64-51630 U (DAI SHENG TONG) 30 MARCH 1989 See the whole document	1-3
A	JP 7-2571 Y2 (DAI SHENG TONG) 25 JANUARY 1995 See the whole document	1-3



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26 SEPTEMBER 2005 (26.09.2005)

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