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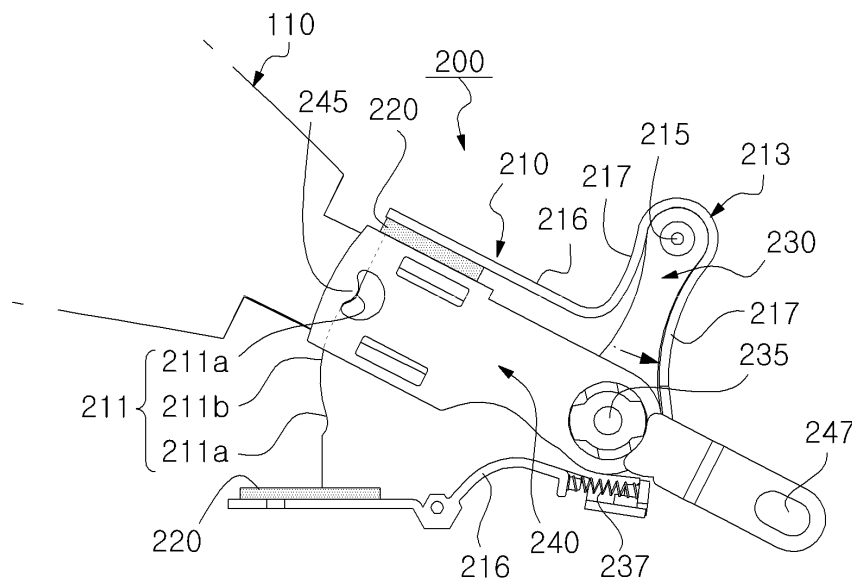
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(54) Motorcycle helmet

(57) Provided is a motorcycle helmet, which includes a helmet body (100) having an open portion (105) formed at a front thereof, and a sun visor (110) based on a pivoting unit (200) provided to at least one of right and left side of the open portion (105) to shield a part of the open portion (105), wherein the pivoting unit (200) includes a mounting portion (210) having an arc-type rim (211) formed at one end thereof and also having dents (211a) inwardly dented at both ends of the arc-type rim (211) and a protrusion (211b) outwardly protruding at a center of the arc-type rim (211), a buffering portion (230) having

one end pivotally coupled to the other end of the mounting portion (210) so that an elastic force is applied to the other end of the buffering portion in a direction away from the arc-type rim (211), and an operating unit (240) having one end coupled to the sun visor (110), the operating unit (240) being pivotally coupled to the other end of the buffering portion (230), the operating unit (240) having a movable projection (245) formed at one end thereof to move in contact with the arc-type rim (211) when the operating unit (240) is pivoting.

FIG. 3a

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Description**TECHNICAL FIELD**

5 [0001] The following disclosure relates to a motorcycle helmet.

BACKGROUND

10 [0002] Generally, a motorcycle helmet is essentially required to protect the head of a driver of a motorcycle, and it is legislated that a driver of a motorcycle must wear a motorcycle helmet when driving on a road. Such a motorcycle helmet has an open portion at its front side in order to ensure a front sight of a driver. In addition, a selectively opened or closed shield may be provided at the open portion to shield wind or dust introduced during driving. Moreover, an openable sun visor may be provided in the shield to prevent solar rays from being directly introduced to the eyes.

15 [0003] Meanwhile, a sun visor (or, a shade) of an existing motorcycle helmet is disclosed in a patent literature below. However, the motorcycle helmet disclosed in the following patent literature does not have a means which may be conveniently controlled and also allows a sun visor to be stopped at an accurate location.

RELATED LITERATURES

20 Patent Literature

[0004] KR10-0649944 B1

SUMMARY

25 [0005] An embodiment of the present disclosure is directed to providing a motorcycle helmet including a pivoting unit which may be conveniently controlled and also allows a sun visor to be stopped at an accurate location.

[0006] In one general aspect, a motorcycle helmet, which includes: a helmet body having an open portion formed at a front thereof; and a sun visor pivotal based on a pivoting unit provided to at least one of right and left side of the open portion to shield a part of the open portion,
30 wherein the pivoting unit includes: a mounting portion having an arc-type rim formed at one end thereof, the mounting portion having dents inwardly dented at both ends of the arc-type rim and a protrusion outwardly protruding at a center of the arc-type rim; a buffering portion having one end pivotally coupled to the other end of the mounting portion so that an elastic force is applied to the other end of the buffering portion in a direction away from the arc-type rim; and an
35 operating unit having one end coupled to the sun visor, the operating unit being pivotally coupled to the other end of the buffering portion, the operating unit having a movable projection formed at one end thereof to move in contact with the arc-type rim when the operating unit is pivoting.

[0007] Here, the pivoting unit may include: a first pivoting unit provided to one of right and left sides of the open portion; and a second pivoting unit provided to the other of the right and left sides of the open portion, wherein a protrusion of
40 the second pivoting unit protrudes less than a protrusion of the first pivoting unit in an outward direction.

[0008] In addition, a connection hole may be formed in the other end of the operating unit, and the motorcycle helmet may further include a control unit having a connecting protrusion formed to be inserted into the connection hole to transfer a driving force to the operating unit while moving in a vertical direction.

45 [0009] In addition, a length of the connection hole in one direction may be longer than a diameter of the connecting protrusion.

[0010] In addition, the control unit may include rails formed in parallel to press the connecting protrusion at both sides thereof, the connecting protrusion may move along the rails, and stoppers bent into a shape corresponding to the connecting protrusion to stop the connecting protrusion may be formed at both ends of the rails.

50 [0011] In addition, a first pivoting restriction unit extending to contact a side of the operating unit may be formed at the mounting portion to restrict a pivoting range of the operating unit.

[0012] In addition, the motorcycle helmet may further include a buffering member provided at the first pivoting restriction unit to buffer an impact between the operating unit and the first pivoting restriction unit.

55 [0013] In addition, two legs extending in parallel may be formed at a terminal of the sun visor, a coupling protrusion protruding to be disposed between the two legs may be formed at one end of the operating unit, and a distance between terminals of the two legs may be smaller than a diameter of the coupling protrusion, and coupling units having a shape corresponding to the coupling protrusion are formed at the two legs to fix the coupling protrusion.

[0014] In addition, the mounting portion may include an extension extending at a predetermined angle with respect to a length direction, and one end of the buffering portion may be pivotal based on a first shaft provided at a terminal of

the extension.

[0015] In addition, a second pivoting restriction unit extending to contact a side of the buffering portion may be formed at the extension to restrict a pivoting range of the buffering portion.

[0016] In addition, the operating unit may be pivotal based on a second shaft provided at the other end of the buffering portion.

[0017] In addition, the motorcycle helmet may further include a spring provided between the other end of the buffering portion and the mounting portion to apply an elastic force to the other end of the buffering portion in a direction away from the arc-type rim.

[0018] In addition, a connection hole may be formed at the other end of the operating unit, the motorcycle helmet may further include a control unit having a link member connected to the connection hole, and the link member may transfer a driving force to the operating unit while moving along a slit formed at the helmet body.

[0019] Features and advantages of the present disclosure will be apparent from the following detailed description taken in conjunction with the accompanying drawings.

[0020] Prior to the description, it should be understood that the terms used in the specification and the appended claims should not be construed as limited to general and dictionary meanings, but interpreted based on the meanings and concepts corresponding to technical aspects of the present disclosure on the basis of the principle that the inventor is allowed to define terms appropriately for the best explanation.

[0021] According to the present disclosure, a motorcycle helmet includes a pivoting unit which may be conveniently controlled and also allows a sun visor to be stopped at an accurate location.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022]

FIG. 1 is a perspective view showing a motorcycle helmet according to an embodiment of the present disclosure, FIGS. 2a and 2b are exploded perspective views showing a pivoting unit depicted in FIG. 1, FIGS. 3a to 3c are plane views showing the pivoting unit depicted in FIG. 1, FIG. 4a is a perspective view showing a pivoting unit and a control unit of a motorcycle helmet according to an embodiment of the present disclosure, and FIG. 4b is a plane view showing modifications of the pivoting unit and the control unit depicted in FIG. 4a, FIG. 5 is a plane view showing a coupling relation between a connection hole and a connecting protrusion depicted in FIG. 4a, FIG. 6 is a plane view showing a coupling relation between a rail of a guide piece and a connecting protrusion depicted in FIG. 4a, FIGS. 7a and 7b are plane views showing a pivoting unit and a control unit of a motorcycle helmet according to an embodiment of the present disclosure, FIG. 8 is a perspective view for defining first and second pivoting units of the motorcycle helmet depicted in FIG. 1, FIG. 9 is a plane view showing the first and second pivoting units depicted in FIG. 8, FIGS. 10a and 10b are perspective views showing a coupling relation of a sun visor and an operating unit of a motorcycle helmet according to an embodiment of the present disclosure, and FIGS. 11 to 13 are perspective views and plane views for illustrating an operation of a motorcycle helmet according to an embodiment of the present disclosure.

DETAILED DESCRIPTION OF EMBODIMENTS

[0023] Objects, specific advantages and new features of the present disclosure will be more apparent from the following detailed description and embodiments taken in conjunction with the accompanying drawings. In the specification, when reference numerals are endowed to components in each drawing, it should be noted that like reference numerals denote like elements even though they are depicted in several drawings. In addition, the terms "first", "second", "one surface", "the other surface" and the like are used for distinguishing one component from another, and components are not limited to the terms. Hereinafter, in a case where detailed description of known functions or configurations in relation to the present disclosure is judged as unnecessarily making the essence of the present disclosure vague, the detailed description will be excluded.

[0024] Hereinafter, preferred embodiments of the present disclosure will be described in detail with reference to the accompanying drawings.

[0025] FIG. 1 is a perspective view showing a motorcycle helmet according to an embodiment of the present disclosure, FIGS. 2a and 2b are exploded perspective views showing a pivoting unit depicted in FIG. 1, and FIGS. 3a to 3c are plane views showing the pivoting unit depicted in FIG. 1.

[0026] As shown in FIGS. 1 to 3, a motorcycle helmet of this embodiment includes a helmet body 100 having an open portion 105 formed at a front thereof, and a sun visor 110 based on a pivoting unit 200 provided to at least one of right and left side of the open portion 105 to shield a part of the open portion 105. The pivoting unit 200 includes a mounting portion 210 having an arc-type rim 211 formed at one end thereof and also having dents 211a inwardly dented at both ends of the arc-type rim 211 and a protrusion 211b outwardly protruding at a center of the arc-type rim 211, a buffering portion 230 having one end pivotally coupled to the other end of the mounting portion 210 so that an elastic force is applied to the other end of the buffering portion in a direction away from the arc-type rim 211, and an operating unit 240 having one end coupled to the sun visor 110, the operating unit 240 being pivotally coupled to the other end of the buffering portion 230, the operating unit 240 having a movable projection 245 formed at one end thereof to move in contact with the arc-type rim 211 when the operating unit 240 is pivoting.

[0027] The helmet body 100 plays a role of protecting the head of a driver. Here, the helmet body 100 is made of material capable of absorbing impacts, and the open portion 105 is formed at the front thereof to ensure a front sight of the driver. In addition, the helmet body 100 may include a shield 107 provided at the open portion to shield wind, dust or the like.

[0028] The sun visor 110 plays a role of preventing solar rays from being directly introduced to the eyes of a driver. Here, the sun visor 110 may shield a part (a top) of the open portion 105 and may be generally provided in the shield 107. In addition, the sun visor 110 is pivotal based on the pivoting unit 200 provided to at least one of right and left side of the open portion 105. Therefore, the sun visor 110 may close or open a part of the open portion 105 while pivoting based on the pivoting unit 200.

[0029] The pivoting unit 200 plays a role of pivoting the sun visor 110. Here, the pivoting unit 200 includes a mounting portion 210, a buffering portion 230, and an operating unit 240 (see FIGS. 2 and 3). In detail, the mounting portion 210 may have a fan shape as a whole, and the arc-type rim 211 is formed at one end of the mounting portion 210. In addition, one end of the buffering portion 230 may be pivotally coupled to the other end (a first shaft 215) of the mounting portion 210, and an elastic force of a spring 237 may be applied to the other end of the buffering portion 230 in a direction away from the arc-type rim 211. In addition, the sun visor 110 is coupled to one end of the operating unit 240, the operating unit 240 is pivotally coupled to the other end (a second shaft 235) of the buffering portion 230, and the movable projection 245 moving in contact with the arc-type rim 211 during pivoting is formed at the other end of the operating unit 240.

[0030] In this configuration, as shown in FIGS. 3a to 3c, the operating unit 240 may pivot based on the other end (the second shaft 235) of the buffering portion 230 in a state where the movable projection 245 is hooked by the arc-type rim 211. At this time, since an elastic force is applied to the other end (the second shaft 235) of the buffering portion 230 in a direction away from the arc-type rim 211, an elastic force is also applied to the operating unit 240 in a direction away from the arc-type rim 211. Therefore, if the operating unit 240 pivots, the movable projection 245 may move while keeping in contact with the arc-type rim 211. In addition, since the dents 211a dented inwardly (toward the center of the arc-type rim 211) are formed at both ends of the arc-type rim 211, when the movable projection 245 are disposed at the dents 211a of the arc-type rim 211 (see FIGS. 3a and 3c), the movable projection 245 may be fixed to the dents 211a by means of the elastic force, and accordingly the operating unit 240 may stop. Meanwhile, since the protrusion 211b protruding outwardly (in the radial direction of the arc-type rim 211) is formed at the center of the arc-type rim 211, when the movable projection 245 is disposed at the protrusion 211b of the arc-type rim 211 (see FIG. 3b), the movable projection 245 may move to an adjacent one of both ends of the arc-type rim 211 along the protrusion 211b with a curvature by means of the elastic force, and accordingly, the operating unit 240 may pivot. In other words, the operating unit 240 may pivot at the protrusion 211b and stop at the dents 211a by means of the elastic force as well as the dents 211a and the protrusion 211b formed at the arc-type rim 211. Due to the above operation of the operating unit 240, the sun visor 110 may be stopped at a first location (where the open portion 105 is opened) and at a second location (where the open portion 105 is closed). In detail, the sun visor 110 is coupled to one end of the operating unit 240. Therefore, when the movable projection 245 of the operating unit 240 is disposed at the upper dent 211a of the arc-type rim 211 so that the operating unit 240 is stopped, the sun visor 110 may be stopped at the first location (see FIG. 3a). In addition, when the movable projection 245 of the operating unit 240 is disposed at the lower dent 211a of the arc-type rim 211 so that the operating unit 240 is stopped, the sun visor 110 may be stopped at the second location (see FIG. 3c).

[0031] Meanwhile, the mounting portion 210, the buffering portion 230, and the operating unit 240 will be described below in more detail.

[0032] First, in order to limit a pivoting range of the operating unit 240, a first pivoting restriction unit 216 extending to contact with a side of the operating unit 240 may be formed at the mounting portion 210. For example, the first pivoting restriction unit 216 may extend vertically from the top and bottom of the operating unit 240 to limit the pivoting range of the operating unit 240. In addition, a buffering member 220 such as sponge may be provided at the first pivoting restriction unit 216 so that the operating unit 240 may buffer impacts between the operating unit 240 and the first pivoting restriction unit 216 in contact with the first pivoting restriction unit 216.

[0033] In addition, the mounting portion 210 may include an extension 213 extending with a predetermined angle with respect to the length direction (for example, extending upwards), and one end of the buffering portion 230 may pivot

based on the first shaft 215 provided at a terminal of the extension 213. In other words, the mounting portion 210 may have a "L" or "J" shape as a whole, including the extension 213, and the buffering portion 230 is provided along the length direction of the extension 213. In addition, in order to limit a pivoting range of the buffering portion 230, a second pivoting restriction unit 217 extending to contact a side of the buffering portion 230 may be formed at the extension 213.

For example, the second pivoting restriction unit 217 may extend vertically from right and left ends of the extension 213 to limit the pivoting range of the buffering portion 230. However, the second pivoting restriction unit 217 need not always limit the pivoting range of the buffering portion 230 at both sides (the right and left sides), but may also limit the pivoting range just at one side (for example, only at the right side). Meanwhile, even though the first pivoting restriction unit 216 and the second pivoting restriction unit 217 have been described as being functionally distinguished, they may not be separately formed, but the first pivoting restriction unit 216 and the second pivoting restriction unit 217 may also be formed successively as depicted in the figures.

[0034] Meanwhile, the spring 237 may be provided between the other end of the buffering portion 230 and one side of the mounting portion 210 (for example, the terminal of the first pivoting restriction unit 216). The spring 237 is a kind of compression springs and may apply an elastic force to the other end of the buffering portion 230 in a direction away from the arc-type rim 211.

[0035] In addition, the operating unit 240 is pivotal based on the second shaft 235 provided at the other end of the buffering portion 230. As a result, since the operating unit 240 pivots based on the second shaft 235 provided at the buffering portion 230 and the buffering portion 230 pivots based on the first shaft 215 provided at the extension 213, the location of the second shaft 235 may vary according to the arc-type rim 211. Therefore, the movable projection 245 of the operating unit 240 may absorb a radius of the arc-type rim 211 varying by means of the dents 211a and the protrusion 211b and smoothly move along the arc-type rim 211. If the operating unit 240 pivots based on a fixed shaft without the buffering portion 230, the movable projection 245 of the operating unit 240 may be broken due to the changing radius of the arc-type rim 211.

[0036] Meanwhile, FIG. 4a is a perspective view showing a pivoting unit and a control unit of a motorcycle helmet according to an embodiment of the present disclosure.

[0037] As shown in FIG. 4a, the operating unit 240 may pivot with a driving force transferred from the control unit 250. Here, the control unit 250 may include a guide piece 251 having rails 252, a coupling piece 253 having a connecting protrusion 254, a guide body 255 having a guide part 256, and a slide 257. At this time, the control unit 250 may be arranged in order of the guide piece 251, the coupling piece 253, the guide body 255, and the slide 257. In detail, the guide body 255 is coupled to the helmet body 100, and the coupling piece 253 and the slide 257 are coupled with the guide body 255 and the guide part 256 being interposed between them, so that the coupling piece 253 and the slide 257 may vertically move along the guide part 256. Therefore, if a driver pushes the exposed slide 257 of the helmet body 100 in a vertical direction by his finger or the like, the connecting protrusion 254 formed at the coupling piece 253 may also move vertically together with the slide 257. At this time, since the connecting protrusion 254 is inserted in and coupled to the connection hole 247 formed at the other end of the operating unit 240, the connecting protrusion 254 may move vertically to transfer a driving force to the operating unit 240. However, since the connecting protrusion 254 moves vertically along the guide part 256 but the connection hole 247 of the operating unit 240 pivots based on the second shaft 235, the connecting protrusion 254 and the connection hole 247 may move in different directions. Even though the connecting protrusion 254 and the connection hole 247 move in different directions as described above, in order to naturally transfer a driving force, as shown in FIG. 5, a clearance C may be formed between the connection hole 247 and the connecting protrusion 254. For example, a length L_1 of the connection hole 247 in one direction (a length in a direction parallel to the length direction of the operating unit 240) may be formed longer than a diameter D_1 of the connecting protrusion 254 to form the clearance C.

[0038] However, the connection hole 247 and the connecting protrusion 254 of the operating unit 240 may not be coupled by means of direction insertion. For example, as shown in FIG. 4b, a link member 258 may be used as the control unit 250. In detail, one end of the link member 258 may be connected to the connection hole 247 of the operating unit 240, and the other end of the link member 258 (a terminal opposite to one end) may move along a slit 259 formed in the helmet body 100. In addition, a grip 258a provided at the other end of the link member 258 is exposed out of the helmet body 100 through the slit 259. Therefore, if a driver pushes the grip 258a, the link member 258 may move to pivot the operating unit 240.

[0039] Meanwhile, as shown in FIG. 6, the rails 252 formed at the guide piece 251 are parallel to each other and presses the connecting protrusion 254 from both sides, and at this time the connecting protrusion 254 moves along the rails 252. In addition, stoppers 252a curved with a shape corresponding to the connecting protrusion 254 may be formed at both ends of the rails 252 to stop the connecting protrusion 254. For example, the connecting protrusion 254 may have a cylindrical shape with a predetermined curvature, and the stopper 252a may be curved with a curvature corresponding to the curvature of the connecting protrusion 254. Therefore, the connecting protrusion 254 may be fixed in a state of being stopped at the top and bottom of the rails 252. Due to this operation of the connecting protrusion 254, the sun visor 110 may be stopped at the first location (where the open portion 105 is opened) and the second location (where

the open portion 105 is closed). In detail, as shown in FIG. 7a, if the slide 257 is pushed downwards so that the connecting protrusion 254 is stopped at the stopper 252a formed at the bottom of the rail 252, the movable projection 245 of the operating unit 240 is disposed at the dent 211a formed at the top of the arc-type rim 211 and stopped, and finally the sun visor 110 may be stopped at the first location (where the open portion 105 is opened). In addition, as shown in FIG. 7b, if the slide 257 pushed upwards so that the connecting protrusion 254 is stopped at the stopper 252a formed at the top of the rail 252, the movable projection 245 of the operating unit 240 is disposed at the dent 211a formed at the bottom of the arc-type rim 211 and stopped, and finally the sun visor 110 may be stopped at the second location (where the open portion 105 is closed).

[0040] However, the control unit 250 may not be provided at both pivoting units 200 provided at the right and left sides of the open portion 105. For example, as shown in FIG. 8, assuming that the pivoting unit 200 provided at one (a right side) of the right and left sides of the open portion 105 is defined as a first pivoting unit 200a and the pivoting unit 200 provided at the other (a left side) of the right and left sides of the open portion 105 is defined as a second pivoting unit 200b, the control unit 250 may be provided only at the first pivoting unit 200a. In this case, as shown in FIG. 9, even though the connection hole 247 into which the connecting protrusion 254 of the control unit 250 is inserted is formed at the operating unit 240 of the first pivoting unit 200a, the connection hole 247 is not formed at the operating unit 240 of the second pivoting unit 200b.

[0041] In addition, only the first pivoting unit 200a receives a driving force from the control unit 250, and the second pivoting unit 200b receives a driving force of the first pivoting unit 200a through the sun visor 110 so that the operating unit 240 pivots. However, when the operating unit 240 of the second pivoting unit 200b pivots with the driving force of the sun visor 110, since the movable projection 245 of the second pivoting unit 200b is disposed at the dent 211a of the arc-type rim 211 and fixed, a torsion moment may be applied to the sun visor 110 and thus break the sun visor 110. In order to prevent this, the protrusion 211b of the second pivoting unit 200b may be formed to protrude outwards less than the protrusion 211b of the first pivoting unit 200a ($P_2 < P_1$), so that the movable projection 245 of the second pivoting unit 200b may be easily separated from the dent 211a of the arc-type rim 211. As described above, if the movable projection 245 of the second pivoting unit 200b is relatively easily separated from the dent 211a of the arc-type rim 211, a torsion moment applied to the sun visor 110 may be reduced to prevent the sun visor from being broken.

[0042] Meanwhile, FIGS. 10a and 10b are perspective views showing a coupling relation of a sun visor and an operating unit of a motorcycle helmet according to an embodiment of the present disclosure. As shown in FIGS. 10a and 10b, a terminal of the sun visor 110 is coupled to one end of the operating unit 240 as follows. In detail, two legs 115 extending in parallel to each other are formed at the terminal of the sun visor 110, and inserts 128 into which the two legs 115 are slidably inserted may be formed at one end of the operating unit 240. In addition, the coupling protrusion 219 protruding to be disposed between the two legs 115 may be formed at one end of the operating unit 240. At this time, a distance L_2 between terminals of the two legs 115 is smaller than a diameter D_2 of the coupling protrusion 219. Therefore, if the legs 115 of the sun visor 110 are inserted into the inserts 128 of the operating unit 240, the coupling protrusion 219 is inserted while spreading terminals of the two legs 115 widely, and after the coupling protrusion 219 is inserted, the terminals of the legs 115 restore their original shapes due to elasticity to fix the coupling protrusion 219. In addition, coupling units 117 (see FIG. 10a) curved with a shape corresponding to the coupling protrusion 219 are formed at the two legs 115, thereby more stably supporting the coupling protrusion 219 inserted between the two legs 115. For example, the coupling protrusion 219 may have a cylindrical shape with a predetermined curvature, and the coupling unit 117 may have a curvature corresponding to the curvature of the coupling protrusion 219.

[0043] FIGS. 11 to 13 are perspective views and plane views for illustrating an operation of a motorcycle helmet according to an embodiment of the present disclosure, and an operating procedure of the motorcycle helmet of this embodiment will be described with reference to FIGS. 11 to 13.

[0044] First, as shown in FIG. 11, if the sun visor 110 is disposed at the first location (where the open portion 105 is opened), the movable projection 245 of the operating unit 240 is disposed at the dent 211a provided at the top of the arc-type rim 211. At this time, since an elastic force is applied to the operating unit 240 through the buffering portion 230 in a direction away from the arc-type rim 211, the movable projection 245 of the operating unit 240 may be fixed to the dent 211a. In addition, the slide 257 connected to the operating unit 240 by means of the connection hole 247 and the connecting protrusion 254 is disposed at the bottom of the guide body 255, and the connecting protrusion 254 may be hooked at the stopper 252a formed at the bottom of the rail 252 and fixed.

[0045] Next, as shown in FIG. 12, if a driver pushes the slide 257 upwards by his finger or the like, the operating unit 240 coupled to the slide 257 pivots based on the second shaft 235. If the operating unit 240 pivots, the movable projection 245 moves from the dent 211a provided at the top of the arc-type rim 211 to the protrusion 211b provided at the center of the arc-type rim 211. At this time, since the buffering portion 230 pivots based on the first shaft 215, the second shaft 235 may move to correspond to the protrusion 211b of the arc-type rim 211. Therefore, the movable projection 245 may move while absorbing a radius of the arc-type rim 211 which varies according to the protrusion 211b. In addition, if the movable projection 245 passes over a part of the protrusion 211b with a curvature, the movable projection 245 may move toward the dent 211a provided at the bottom of the arc-type rim 211 by means of the elastic force applied to the

operating unit 240. Simultaneously, the sun viser 110 moves from the first location (where the open portion 105 is opened) to the second location (where the open portion 105 is closed).

[0046] Next, as shown in FIG. 13, if the slide 257 is completely moved to the top of the guide body 255, the connecting protrusion 254 may be hooked at the stopper 252a formed at the top of the rail 252 and fixed. In addition, the movable projection 245 of the operating unit 240 is disposed at the dent 211a provided at the bottom of the arc-type rim 211. Since an elastic force is applied to the operating unit 240 through the buffering portion 230 in a direction away from the arc-type rim 211, the movable projection 245 of the operating unit 240 may be fixed to the dent 211a. In addition, the sun viser 110 may be completely moved to the second location (wherein the open portion 105 is closed) and fixed.

[0047] The above operating procedure describes that the sun viser 110 moves from the first location (where the open portion 105 is opened) to the second location (where the open portion 105 is closed). An operating procedure in which the sun viser 110 moves from the second location (where the open portion 105 is closed) to the first location (where the open portion 105 is opened) is in a reverse order thereto.

[0048] While the exemplary embodiments have been shown and described, it will be understood by those skilled in the art that various changes in form and details may be made thereto without departing from the spirit and scope of the present disclosure as defined by the appended claims. For the purpose of clarity and a concise description features are described herein as part of the same or separate embodiments, however, alternative embodiments having combinations of all or some of the features described in these separate embodiments are also envisaged. In addition, many modifications can be made to adapt a particular situation or material to the teachings of the present disclosure without departing from the essential scope thereof.

[0049] Therefore, it is intended that the present disclosure not be limited to the particular exemplary embodiments disclosed as the best mode contemplated for carrying out the present disclosure, but that the present disclosure will include all embodiments falling within the scope of the appended claims.

Reference Symbols

100: helmet body	105: open portion
107: shield	110: sun viser
115: leg	117: coupling unit
200: pivoting unit	200a: first pivoting unit
200b: second pivoting unit	210: mounting portion
211: arc-type rim	211a: dent
211b: protrusion	213: extension
215: first shaft	216: first pivoting restriction unit
217: second pivoting restriction unit	218: insert
219: coupling protrusion	220: buffering member
230: buffering portion	235: second shaft
237: spring	240: operating unit
245: movable projection	247: connection hole
250: control unit	251: guide piece
252: rail	252a: stopper
253: coupling piece	254: connecting protrusion
255: guide body	256: guide part
257: slide	258: link member
258a: grip	259: slit
L ₁ : length of the connection hole in one direction	
D ₁ : diameter of the connecting protrusion	
P ₁ , P ₂ : degree of the protrusion C: clearance	
L ₂ : length between terminals of the legs	
D ₂ : diameter of the coupling protrusion	

Claims

1. A motorcycle helmet, comprising:

a helmet body having an open portion formed at a front thereof; and

a sun viser pivotal based on a pivoting unit provided to at least one of right and left side of the open portion to shield a part of the open portion,
wherein the pivoting unit includes:

a mounting portion having an arc-type rim formed at one end thereof, the mounting portion having dents inwardly dented at both ends of the arc-type rim and a protrusion outwardly protruding at a center of the arc-type rim;
a buffering portion having one end pivotally coupled to the other end of the mounting portion so that an elastic force is applied to the other end of the buffering portion in a direction away from the arc-type rim; and
an operating unit having one end coupled to the sun viser, the operating unit being pivotally coupled to the other end of the buffering portion, the operating unit having a movable projection formed at one end thereof to move in contact with the arc-type rim when the operating unit is pivoting.

2. The motorcycle helmet according to claim 1, wherein the pivoting unit includes:

a first pivoting unit provided to one of right and left sides of the open portion; and
a second pivoting unit provided to the other of the right and left sides of the open portion,
wherein a protrusion of the second pivoting unit protrudes less than a protrusion of the first pivoting unit in an outward direction.

3. The motorcycle helmet according to claim 1 or 2,

wherein a connection hole is formed in the other end of the operating unit,
and

wherein the motorcycle helmet further comprises a control unit having a connecting protrusion formed to be inserted into the connection hole to transfer a driving force to the operating unit while moving in a vertical direction.

4. The motorcycle helmet according to claim 3,

wherein a length of the connection hole in one direction is longer than a diameter of the connecting protrusion.

5. The motorcycle helmet according to claim 3 or 4,

wherein the control unit includes rails formed in parallel to press the connecting protrusion at both sides thereof, wherein the connecting protrusion moves along the rails, and
wherein stoppers bent into a shape corresponding to the connecting protrusion to stop the connecting protrusion are formed at both ends of the rails.

6. The motorcycle helmet according to any one of claims 1-5,

wherein a first pivoting restriction unit extending to contact a side of the operating unit is formed at the mounting portion to restrict a pivoting range of the operating unit.

7. The motorcycle helmet according to claim 6, further comprising:

a buffering member provided at the first pivoting restriction unit to buffer an impact between the operating unit and the first pivoting restriction unit.

8. The motorcycle helmet according to any one of claims 1-7,

wherein two legs extending in parallel are formed at a terminal of the sun viser,
wherein a coupling protrusion protruding to be disposed between the two legs is formed at one end of the operating unit, and

wherein a distance between terminals of the two legs is smaller than a diameter of the coupling protrusion, and
coupling units having a shape corresponding to the coupling protrusion are formed at the two legs to fix the coupling protrusion.

9. The motorcycle helmet according to any one of claims 1-8,

wherein the mounting portion includes an extension extending at a predetermined angle with respect to a length direction, and

wherein one end of the buffering portion is pivotal based on a first shaft provided at a terminal of the extension.

10. The motorcycle helmet according to claim 9,

wherein a second pivoting restriction unit extending to contact a side of the buffering portion is formed at the extension to restrict a pivoting range of the buffering portion.

11. The motorcycle helmet according to claim 9 or 10,

wherein the operating unit is pivotal based on a second shaft provided at the other end of the buffering portion.

12. The motorcycle helmet according to any one of claims 1-11, further comprising:

a spring provided between the other end of the buffering portion and the mounting portion to apply an elastic force to the other end of the buffering portion in a direction away from the arc-type rim.

13. The motorcycle helmet according to any one of claims 1-12,

wherein a connection hole is formed at the other end of the operating unit,

wherein the motorcycle helmet further comprises a control unit having a link member connected to the connection hole, and

wherein the link member transfers a driving force to the operating unit while moving along a slit formed at the helmet body.

FIG. 1

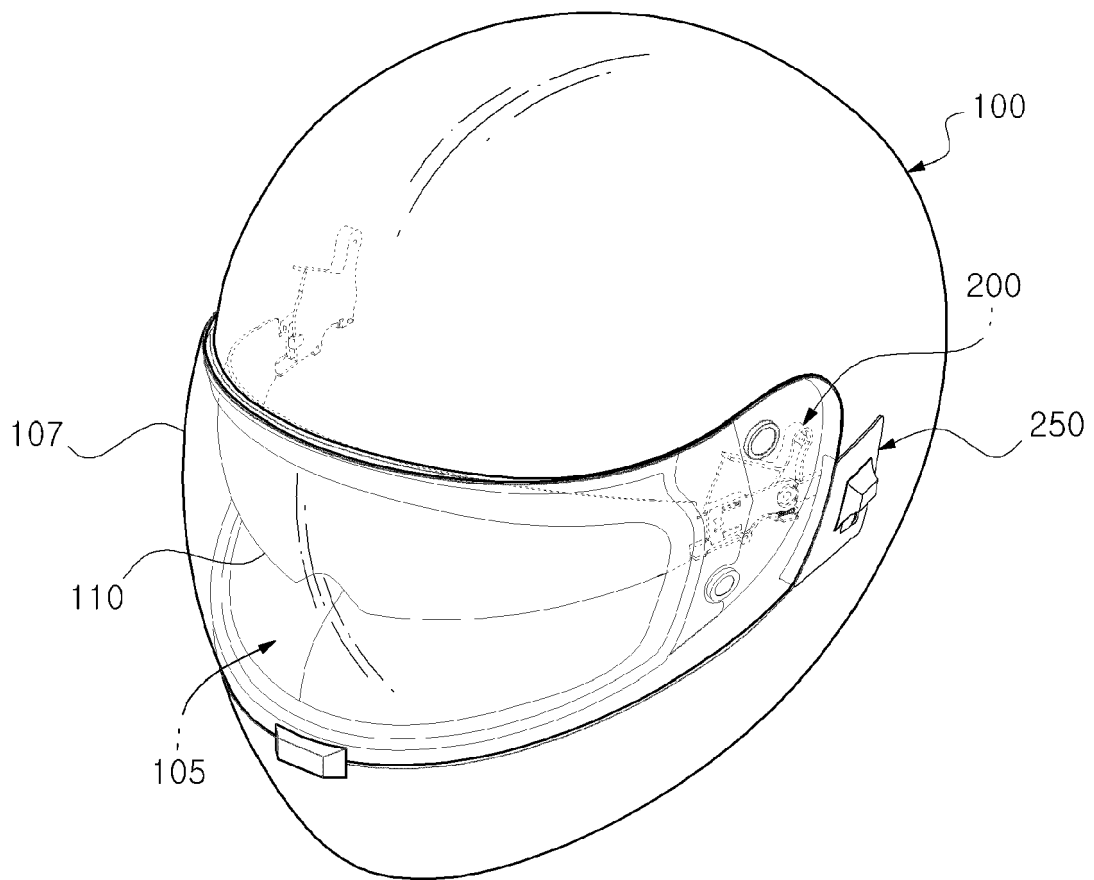


FIG. 2a

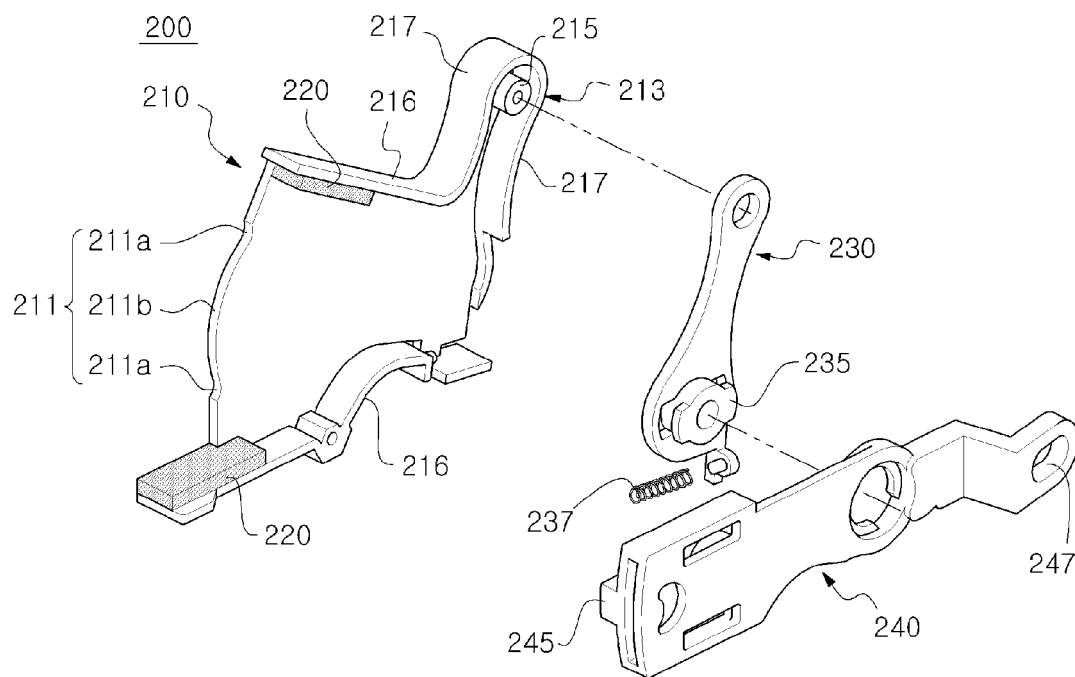


FIG. 2b

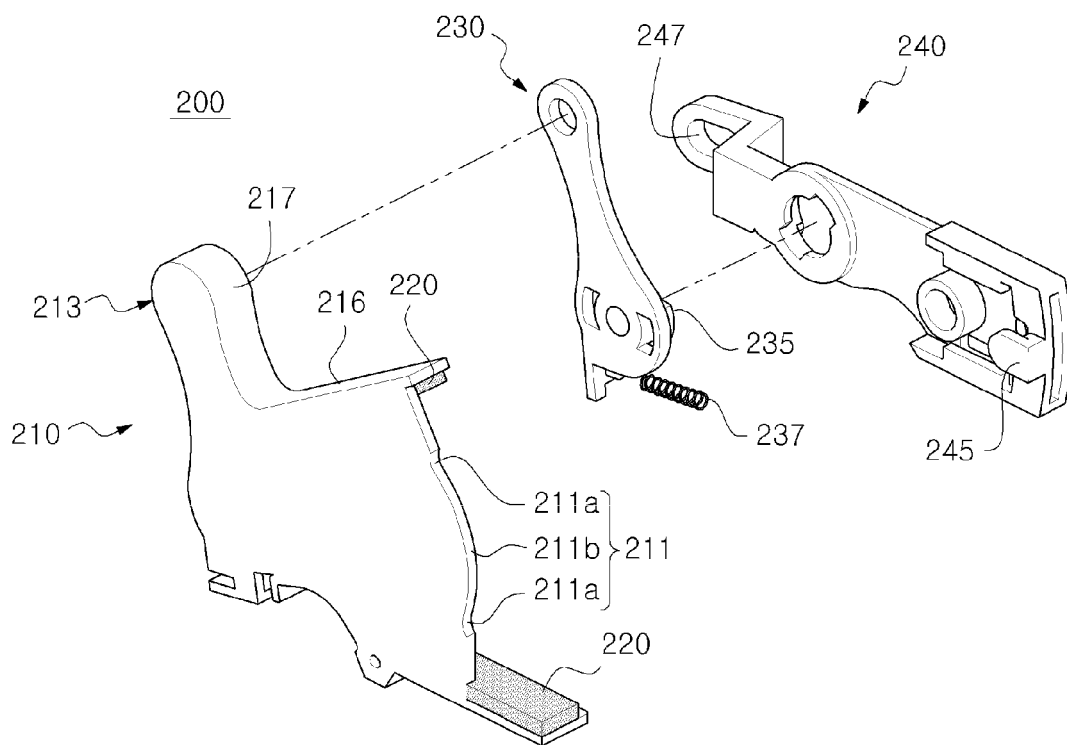


FIG. 3a

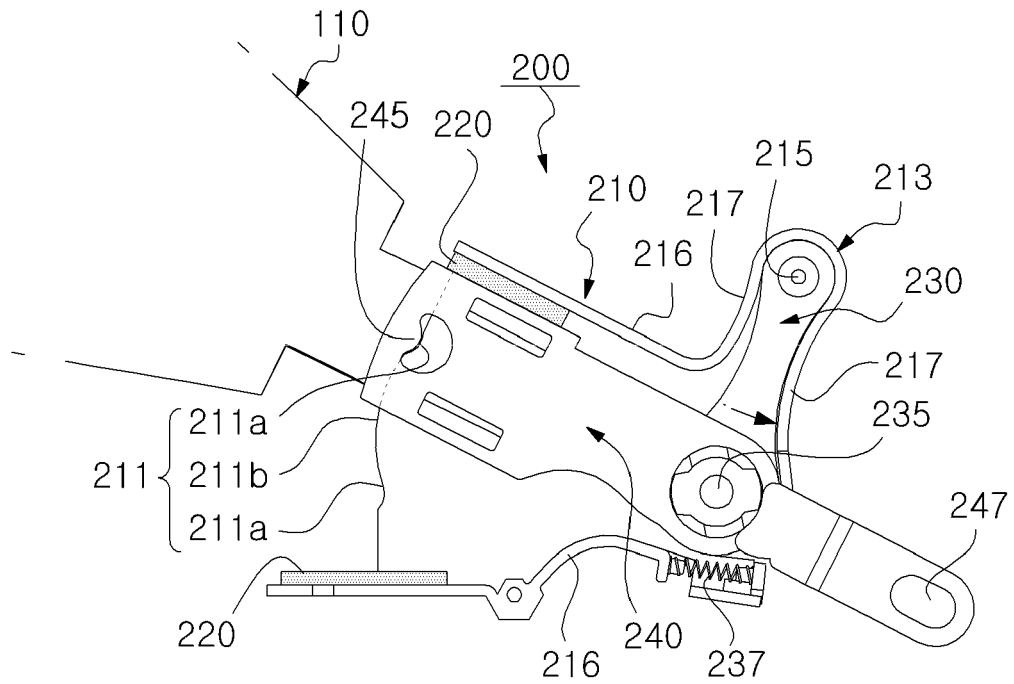


FIG. 3b

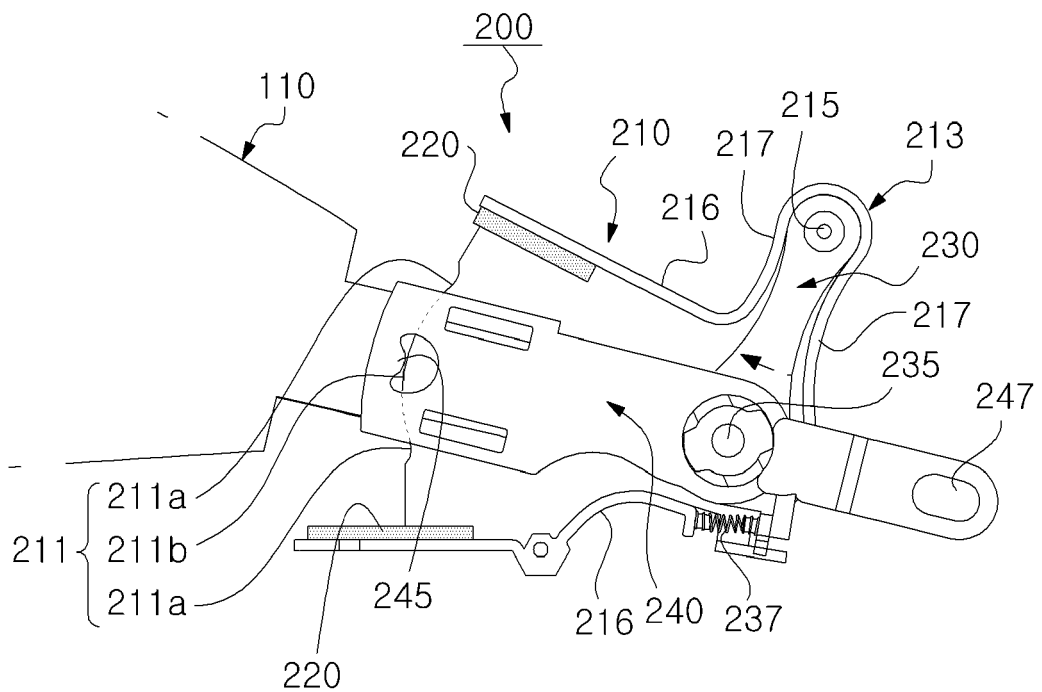


FIG. 3c

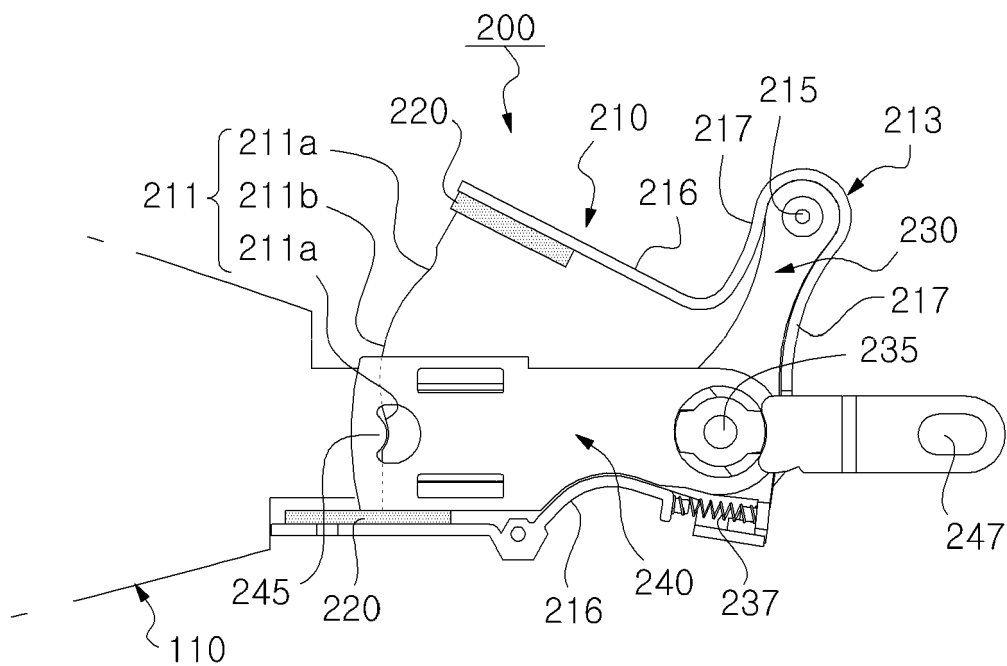


FIG. 4a

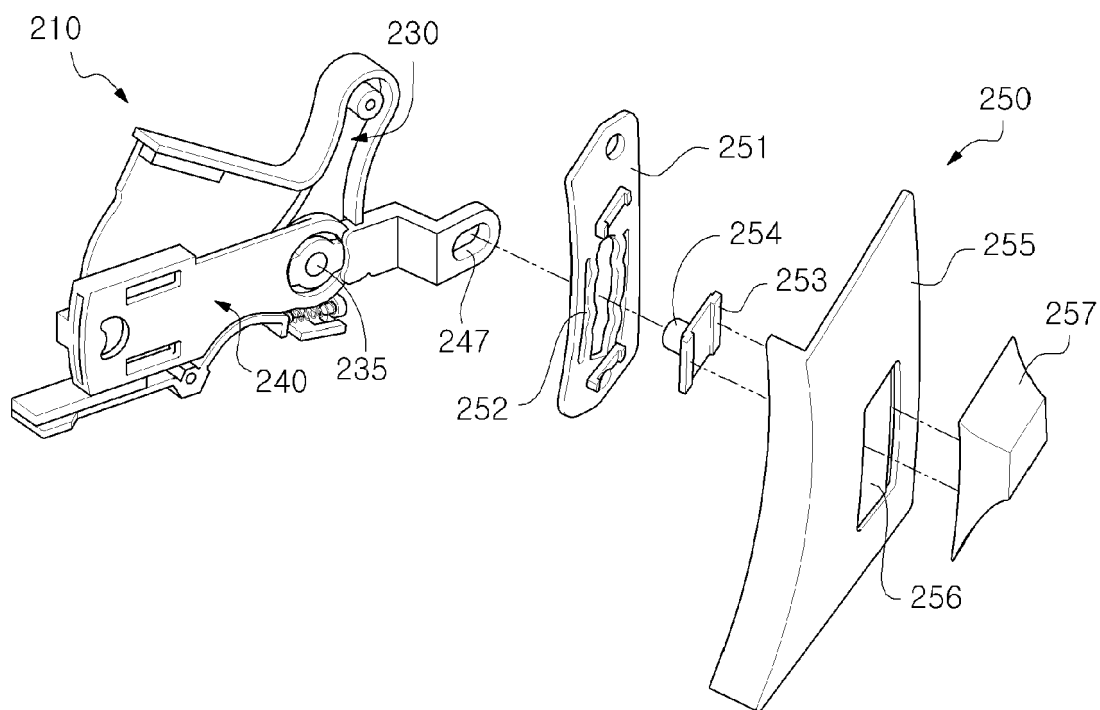


FIG. 4b

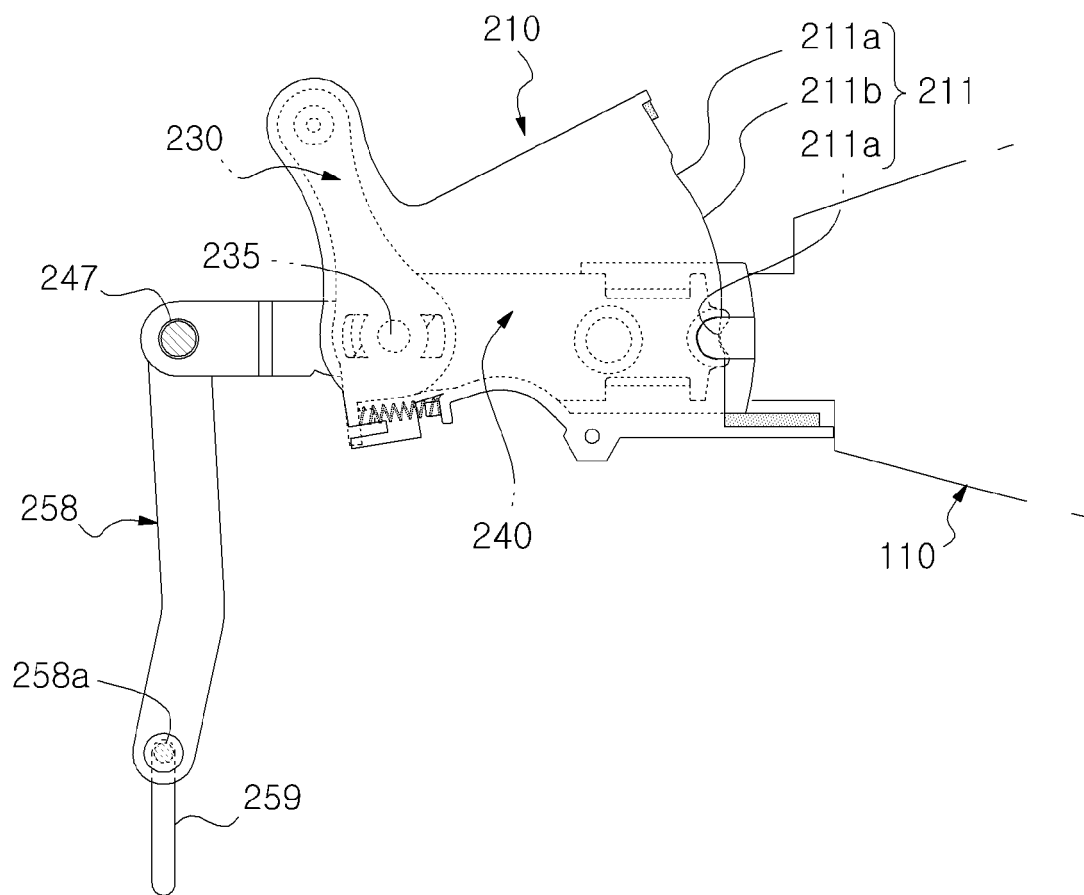


FIG. 5

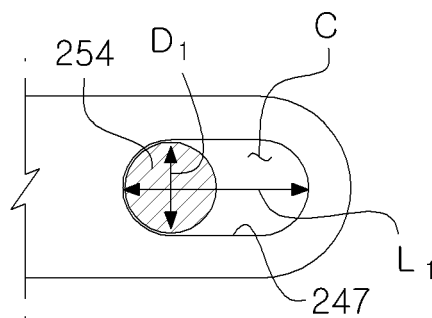


FIG. 6

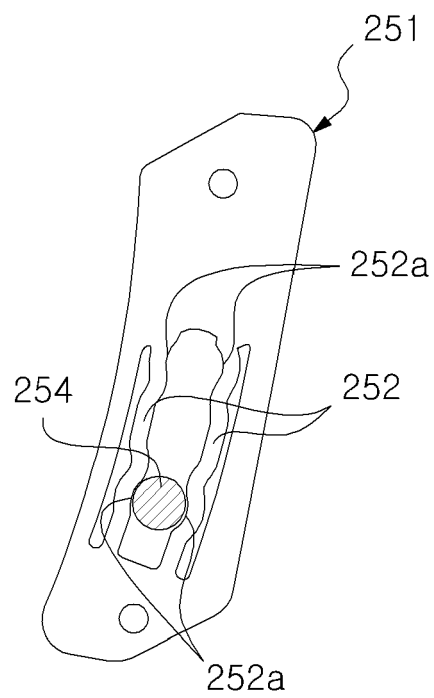


FIG. 7a

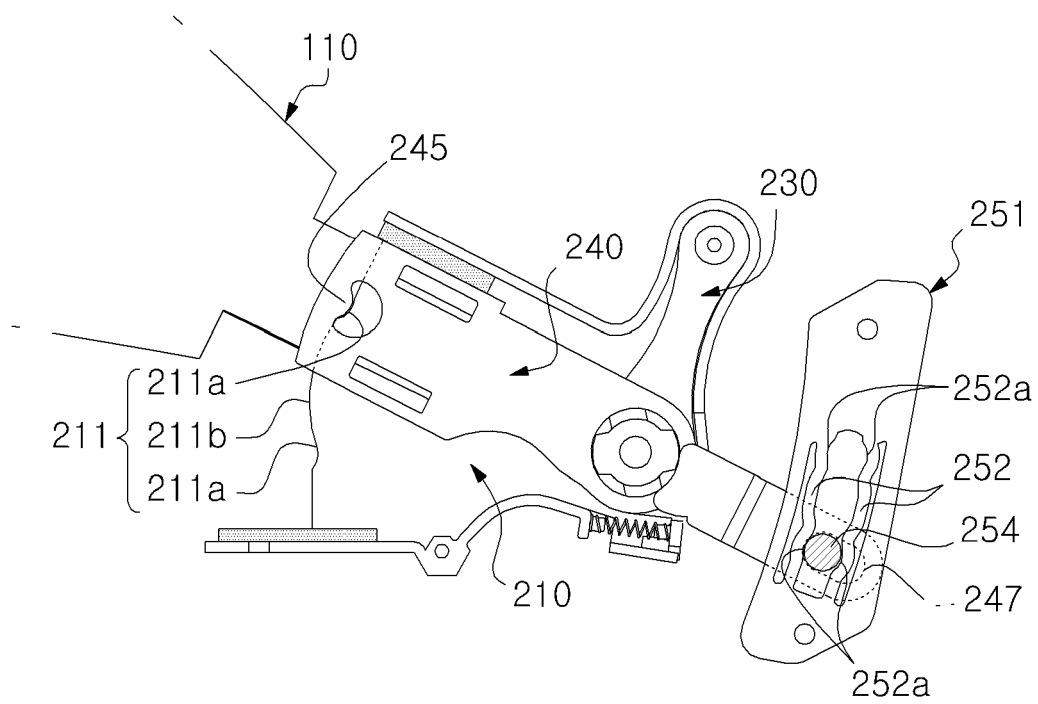


FIG. 7b

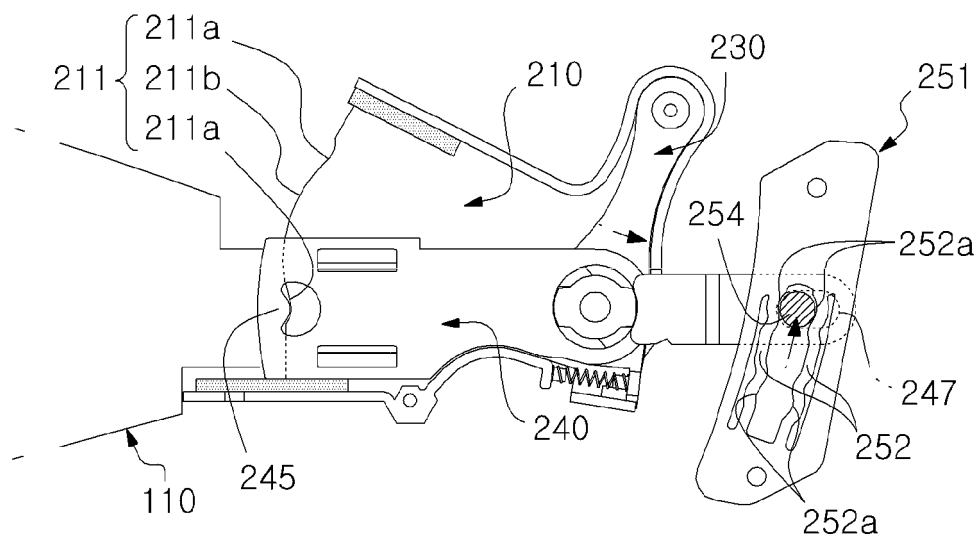


FIG. 8

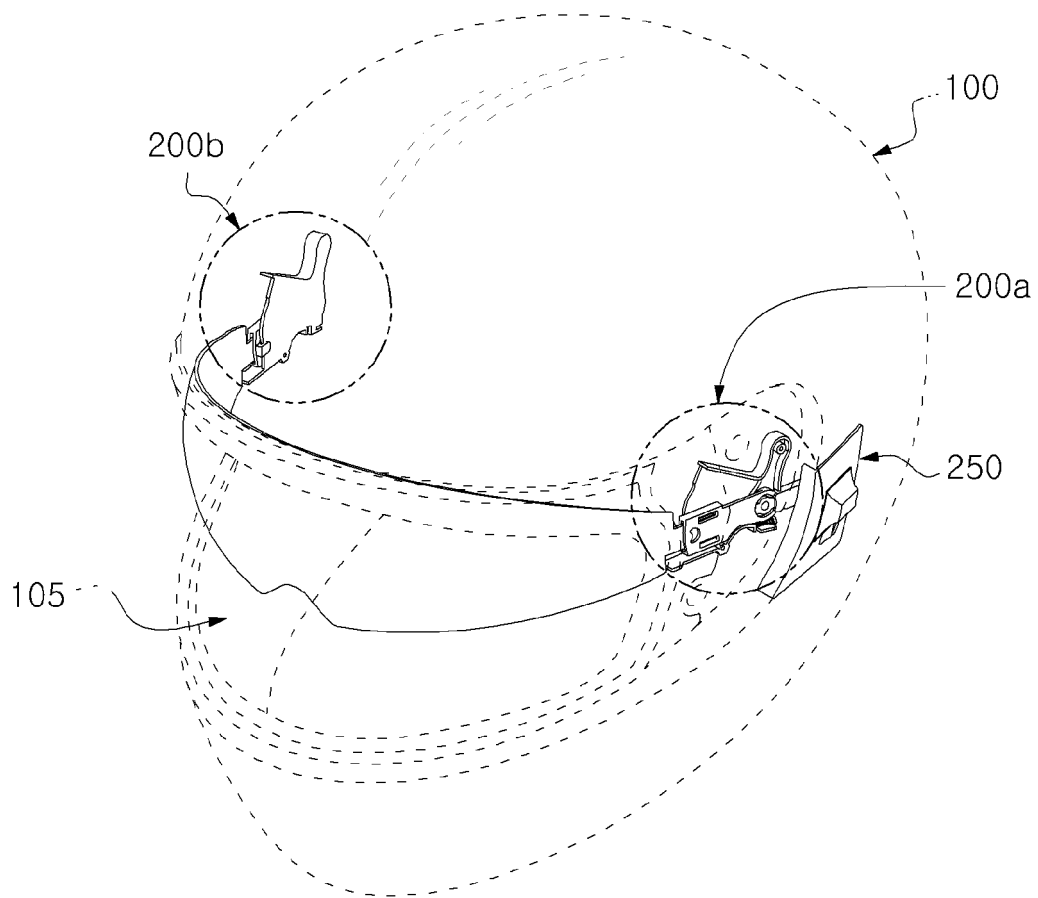


FIG. 9

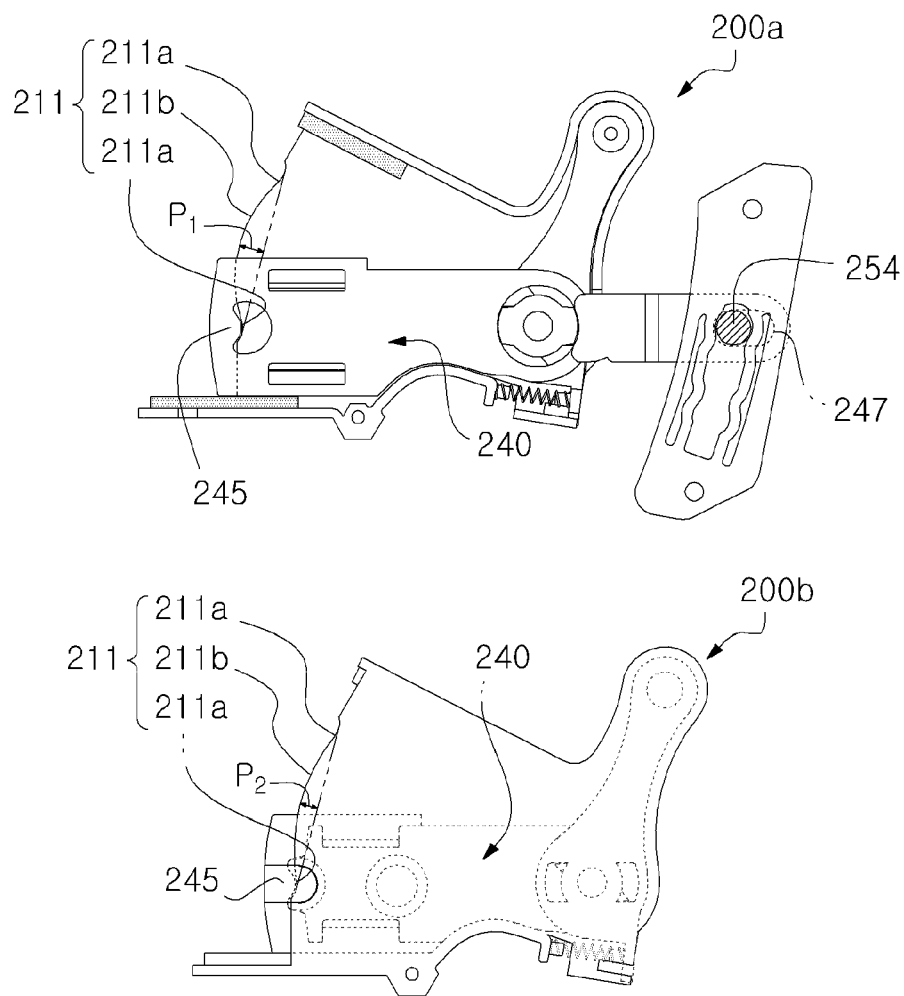


FIG. 10a

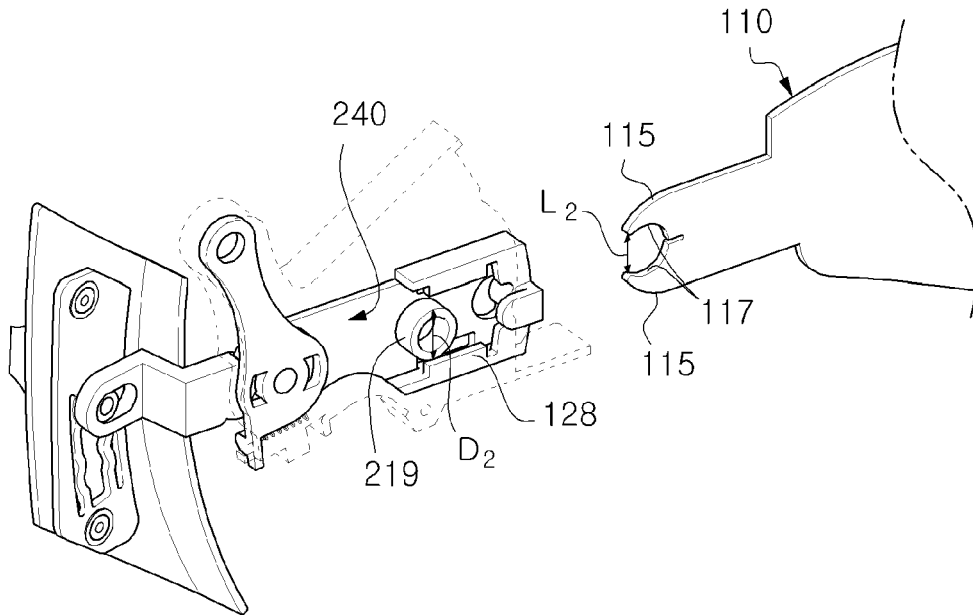


FIG. 10b

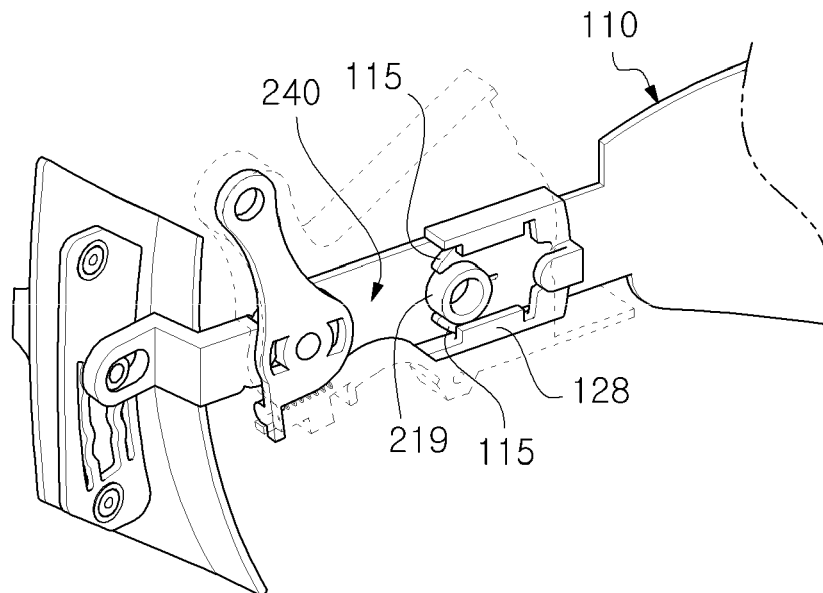


FIG. 11

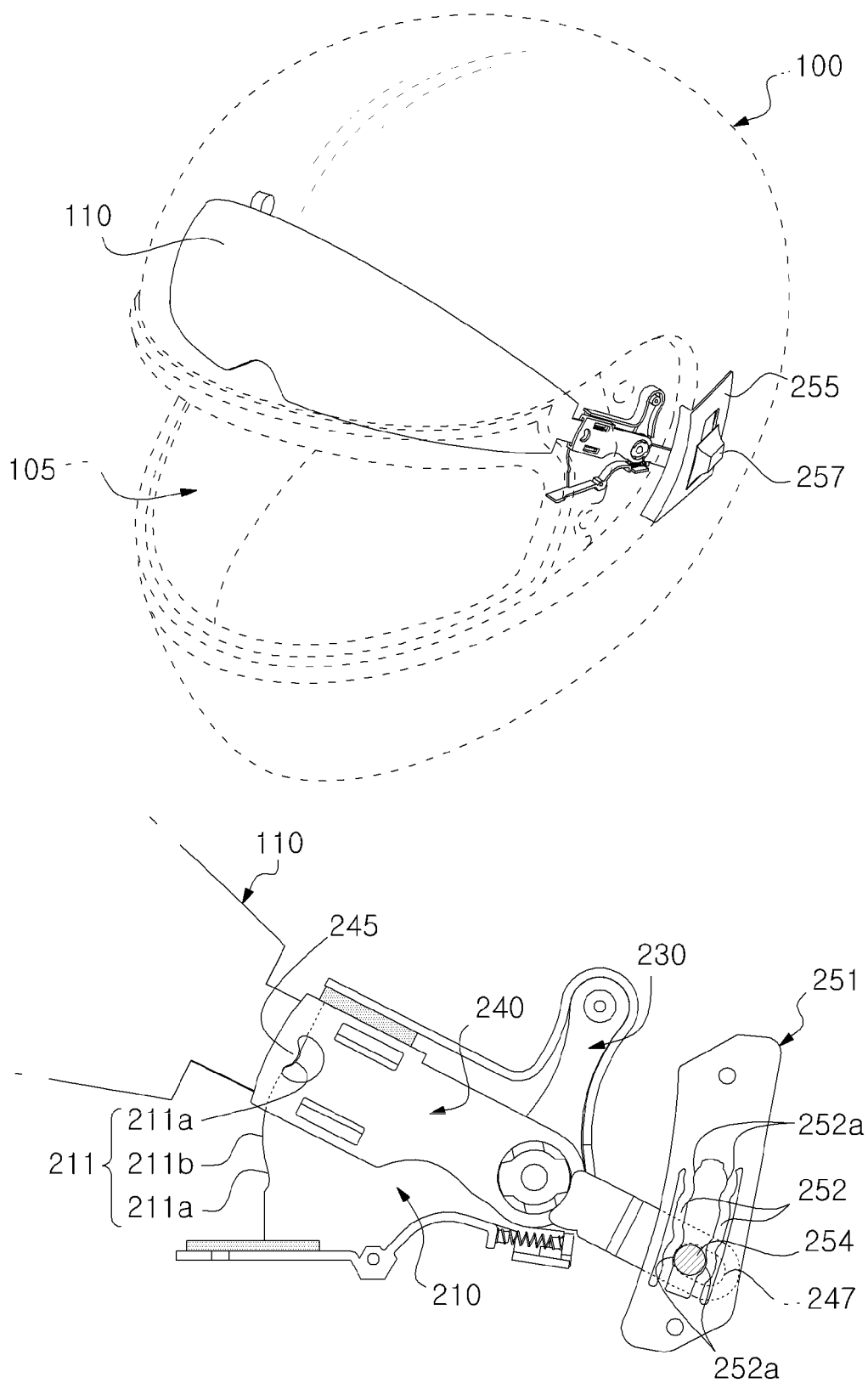


FIG. 12

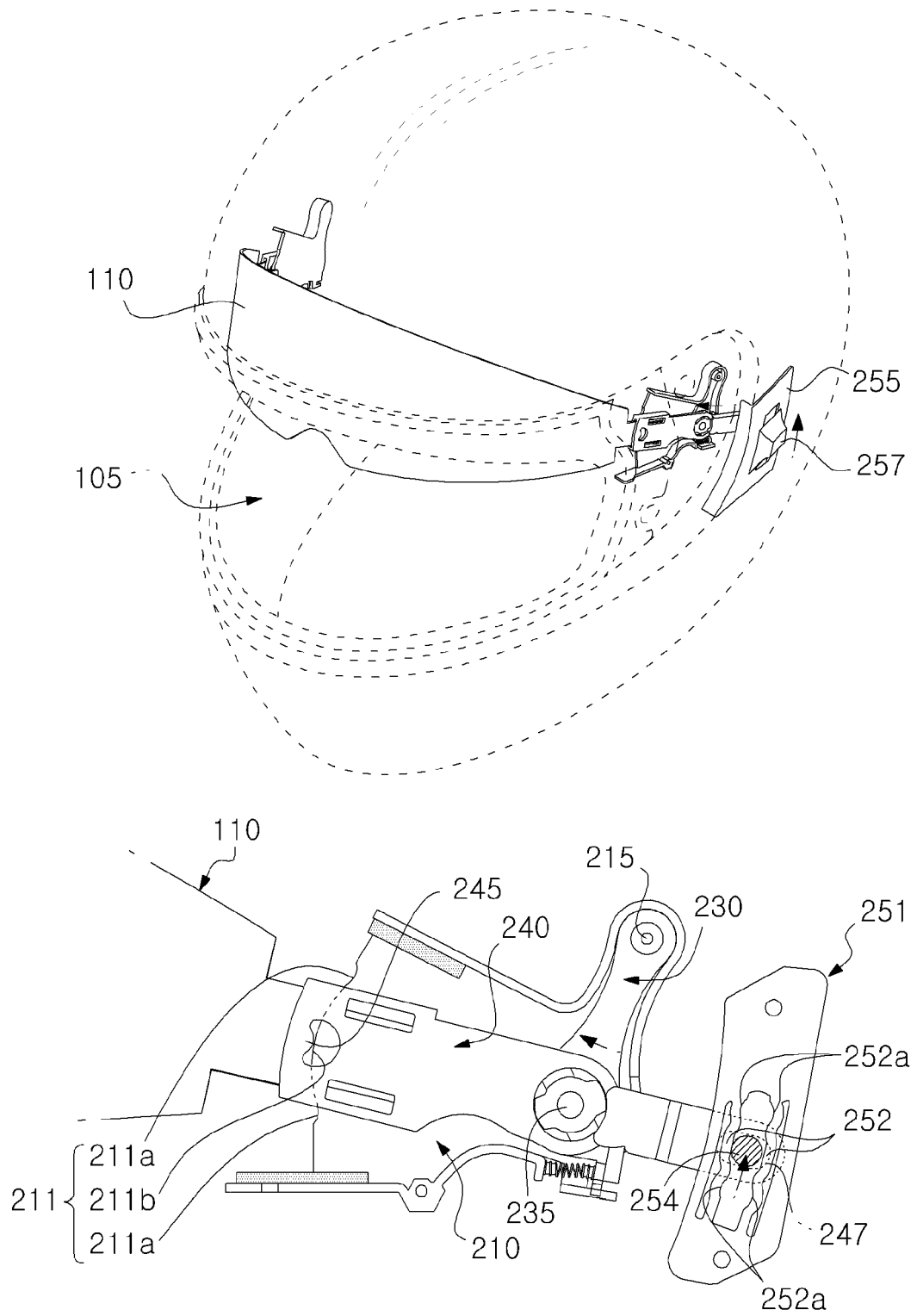
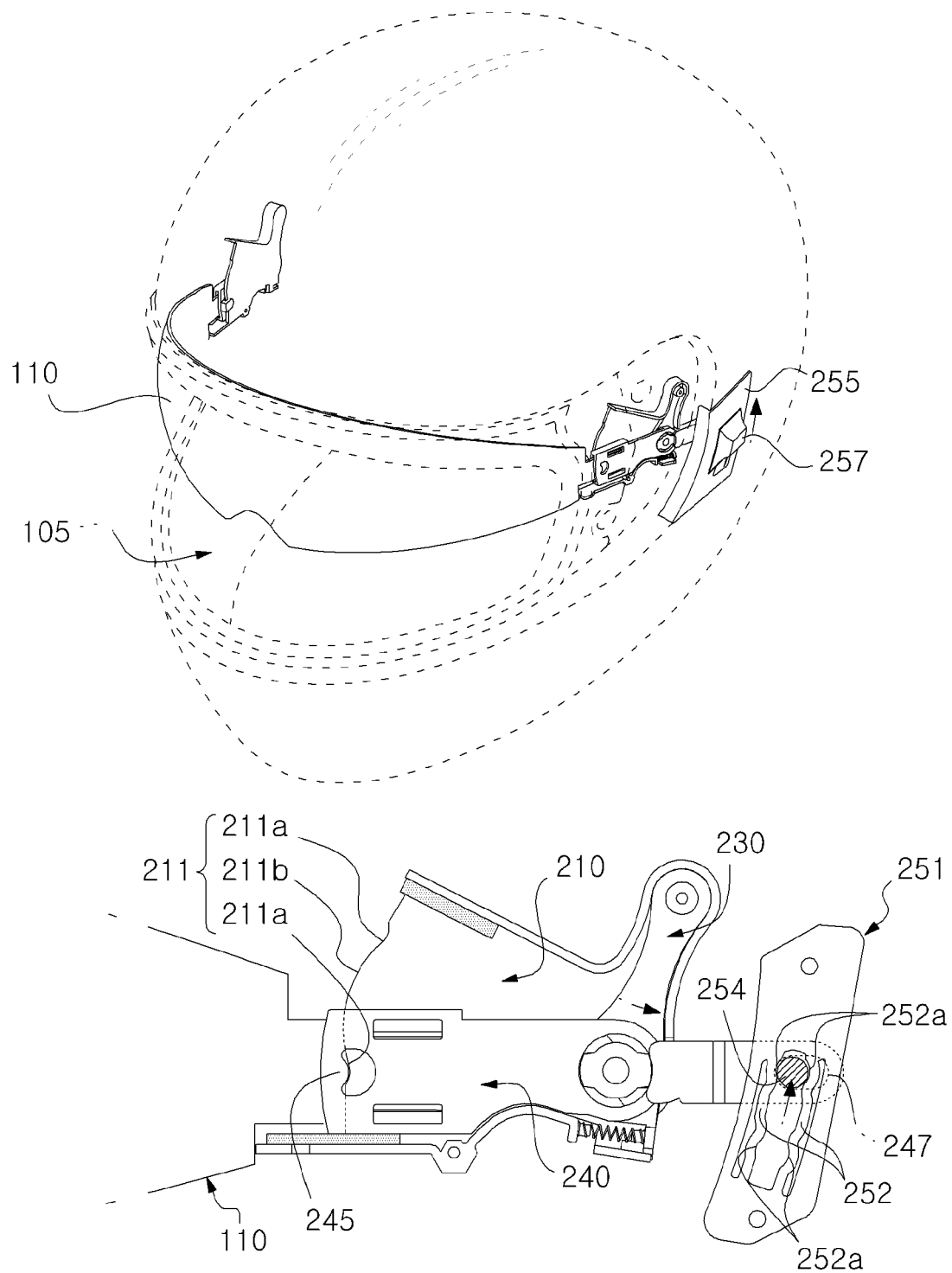


FIG. 13





EUROPEAN SEARCH REPORT

 Application Number
 EP 14 17 3480

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A	US 2009/070908 A1 (GAFFORIO LUCA [IT] ET AL) 19 March 2009 (2009-03-19) * paragraphs [0072] - [0080]; figures 4,6 *	1	INV. A42B3/22
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A	US 2013/031699 A1 (GAFFORIO LUCA [IT] ET AL) 7 February 2013 (2013-02-07) * claim 1; figure 3 * *****	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) A42B
Place of search The Hague		Date of completion of the search 11 November 2014	Examiner D'Souza, Jennifer
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