



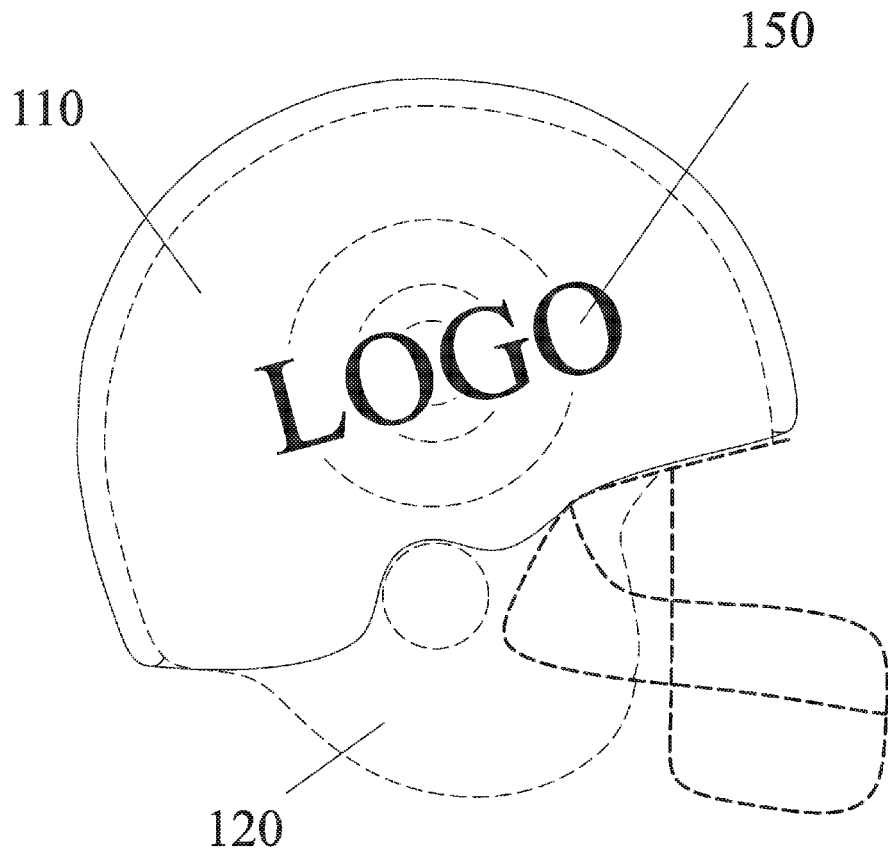
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(19) **United States**(12) **Patent Application Publication**
HUSAIN(10) **Pub. No.: US 2017/0208889 A1**(43) **Pub. Date: Jul. 27, 2017**(54) **EXTERNAL SHOCK ABSORBING PAD FOR
PROTECTIVE HEADGEAR WITH A
DISPLAY FUNCTION****Publication Classification**(51) **Int. Cl.***A42B 3/06* (2006.01)*A42B 3/04* (2006.01)*A63B 71/08* (2006.01)(52) **U.S. Cl.**CPC *A42B 3/062* (2013.01); *A63B 71/081*(2013.01); *A42B 3/0473* (2013.01); *A42B**3/066* (2013.01)(71) Applicant: **Abbas M. HUSAIN**, Voorhees, NJ
(US)(72) Inventor: **Abbas M. HUSAIN**, Voorhees, NJ
(US)(21) Appl. No.: **15/415,855**(22) Filed: **Jan. 25, 2017****Related U.S. Application Data**(60) Provisional application No. 62/286,844, filed on Jan.
25, 2016.

(57)

ABSTRACT

An external shock absorbing pad for helmets with a display function has a transparent shock absorbing pad that externally covers a protective helmet to provide additional impact protection by absorbing kinetic energy during impact. The shock absorbing pad is transparent so that any team logos or graphics are still visible after application. An adhesive is applied to an inner surface of the pad allows a user to apply the pad to the exterior portion of the helmet. The user peels back a protective backing and then applies the pad to the helmet so that it follows the contours and shape of the helmet. The pad is made from a polyurethane plastic.

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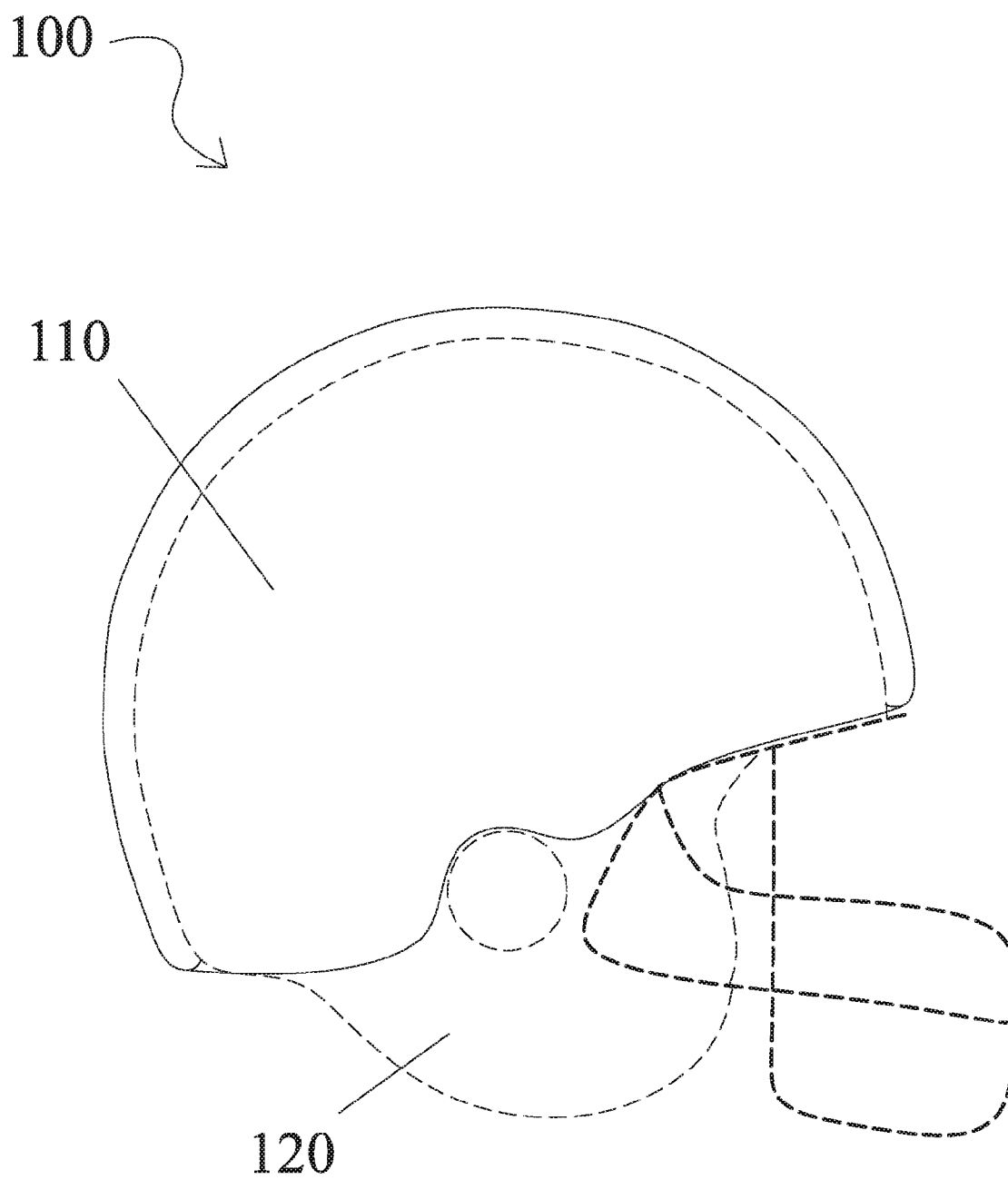


FIG. 1

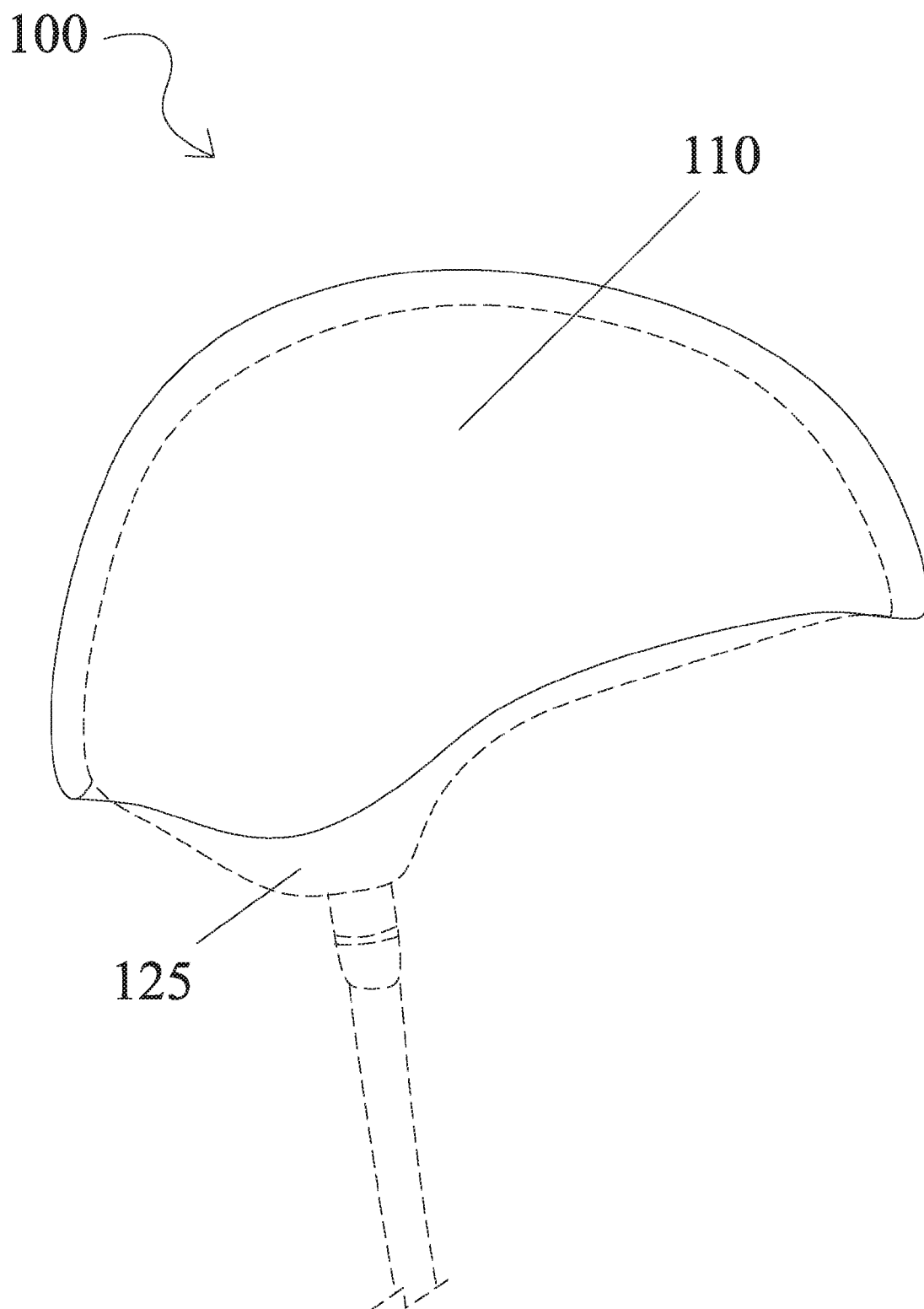


FIG. 2

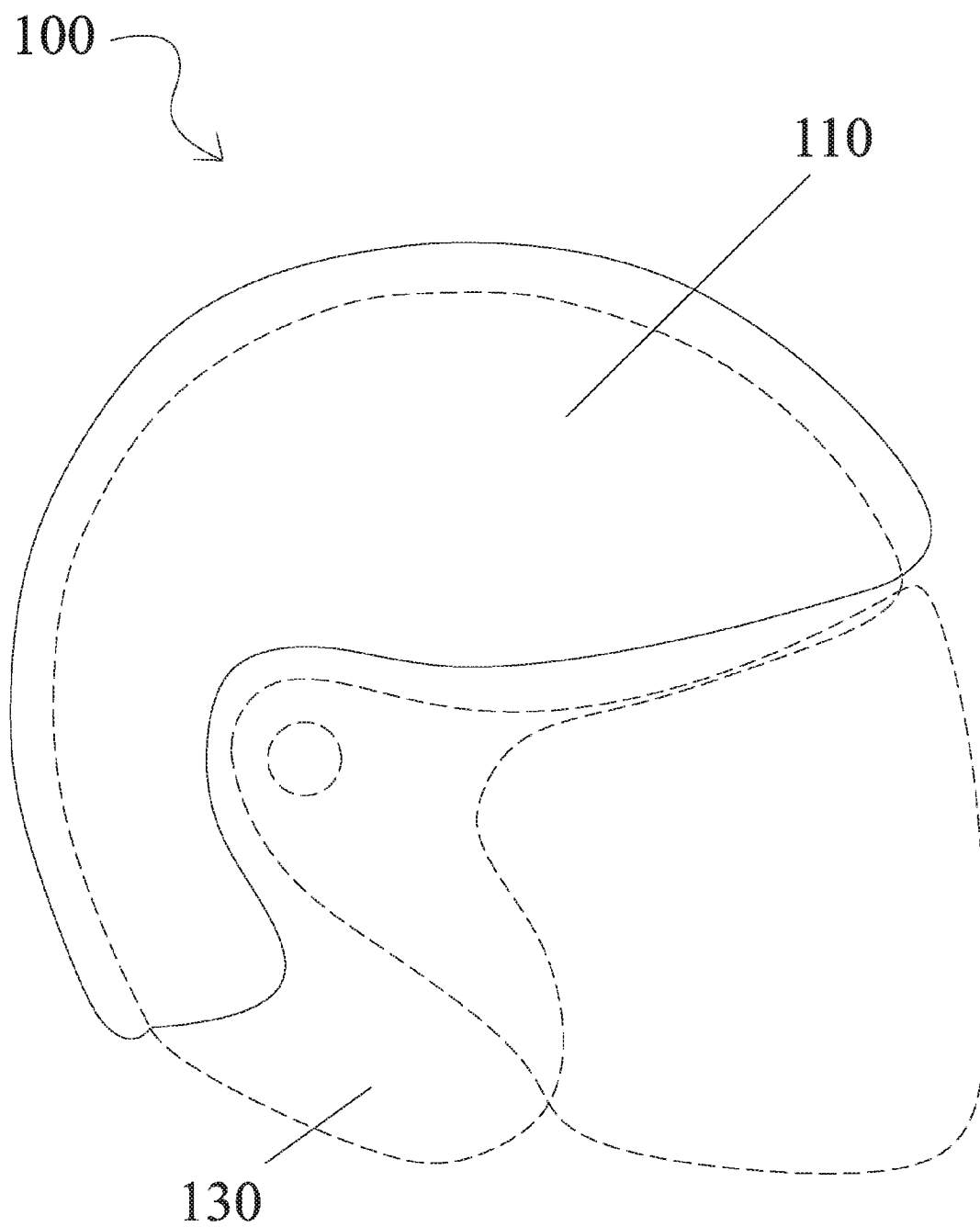


FIG. 3

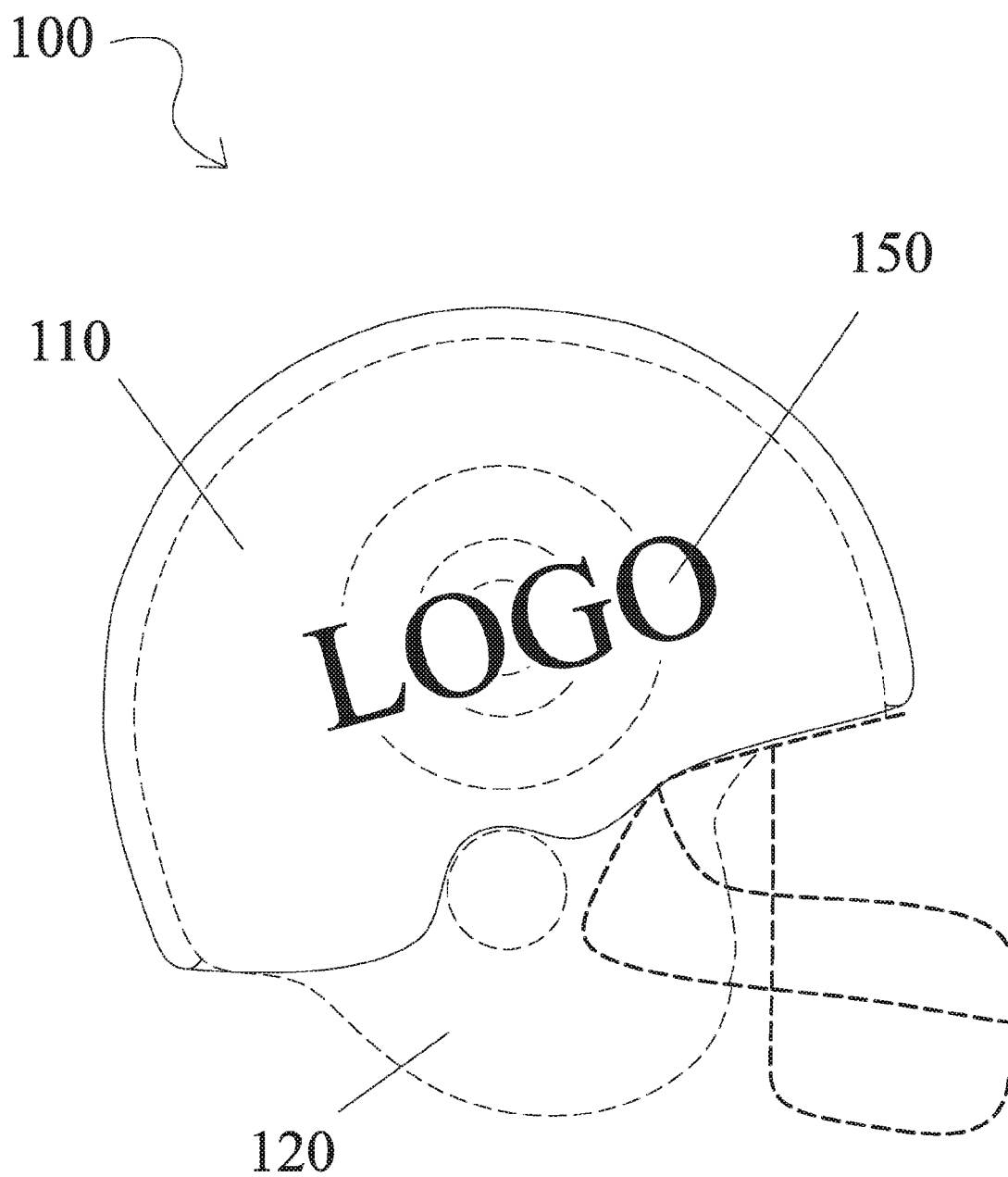


FIG. 4

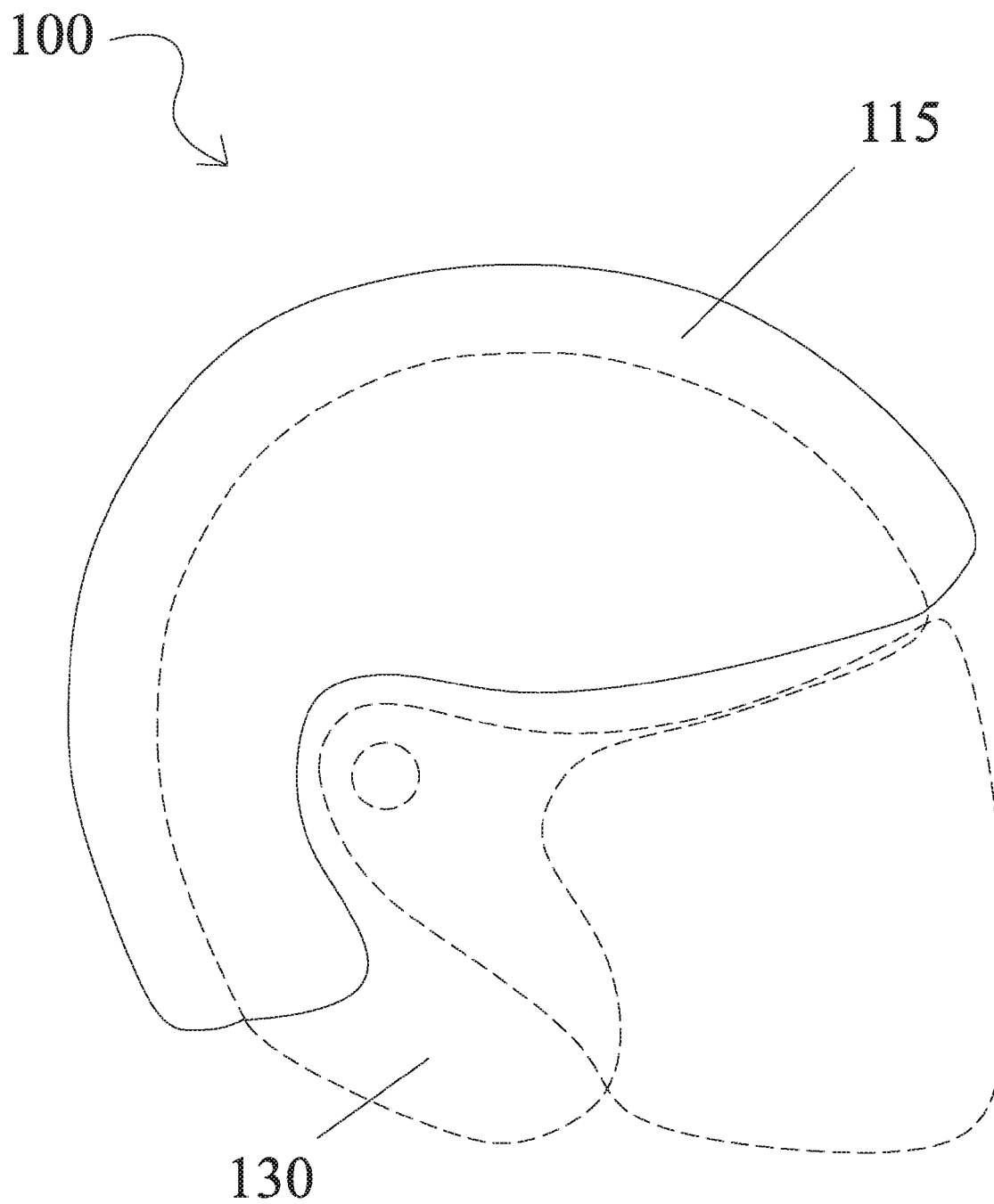


FIG. 5

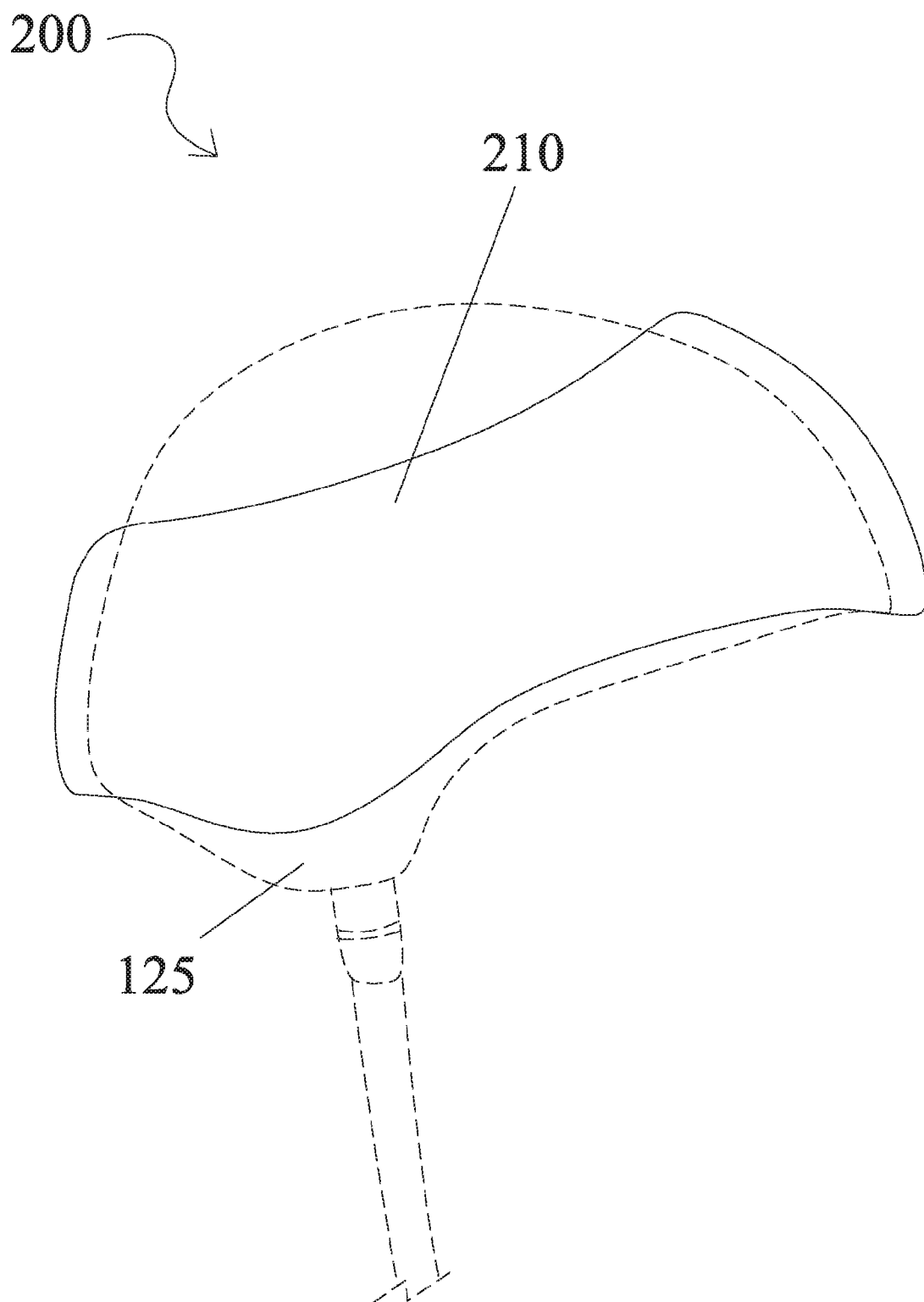


FIG. 6

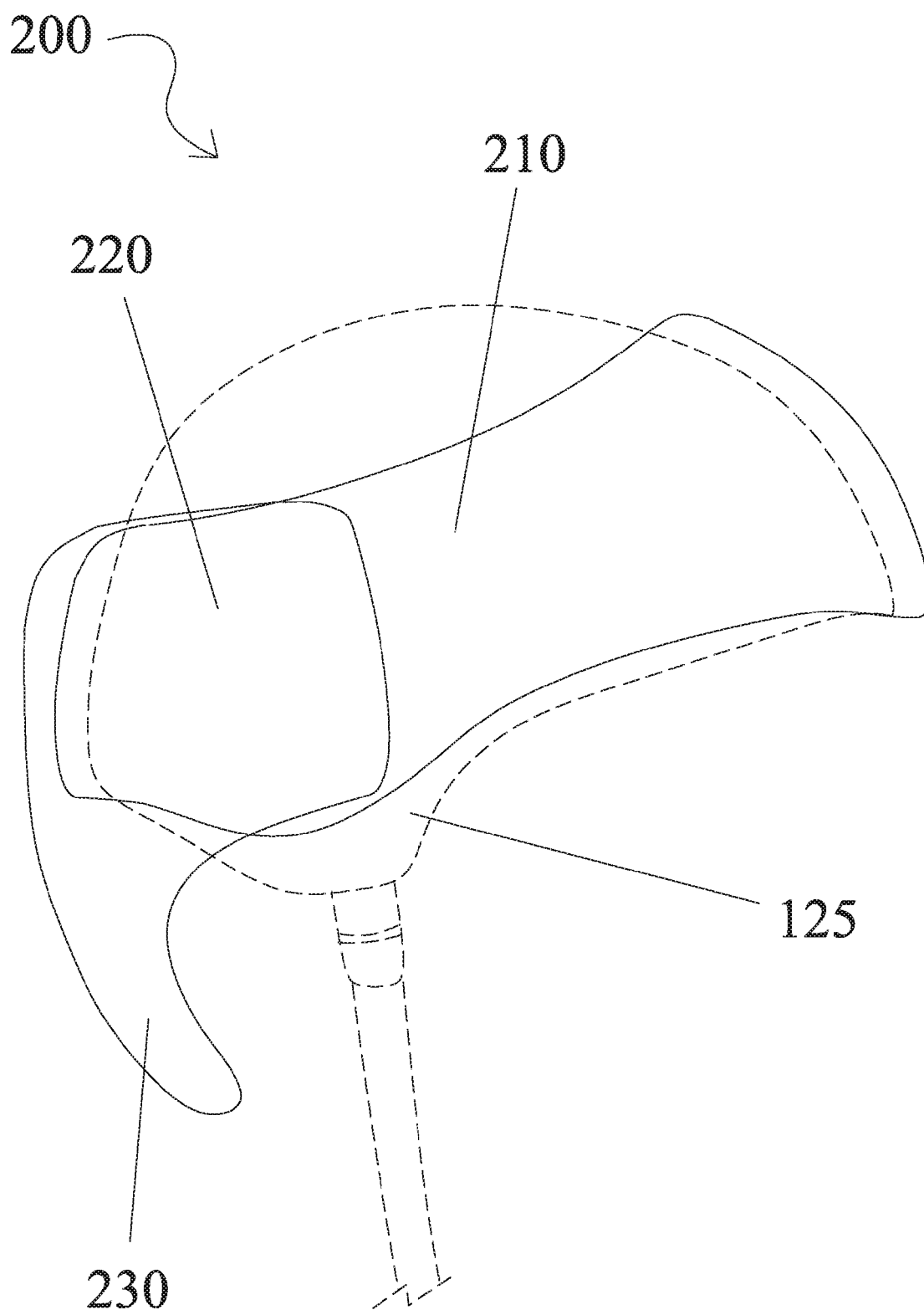


FIG. 7

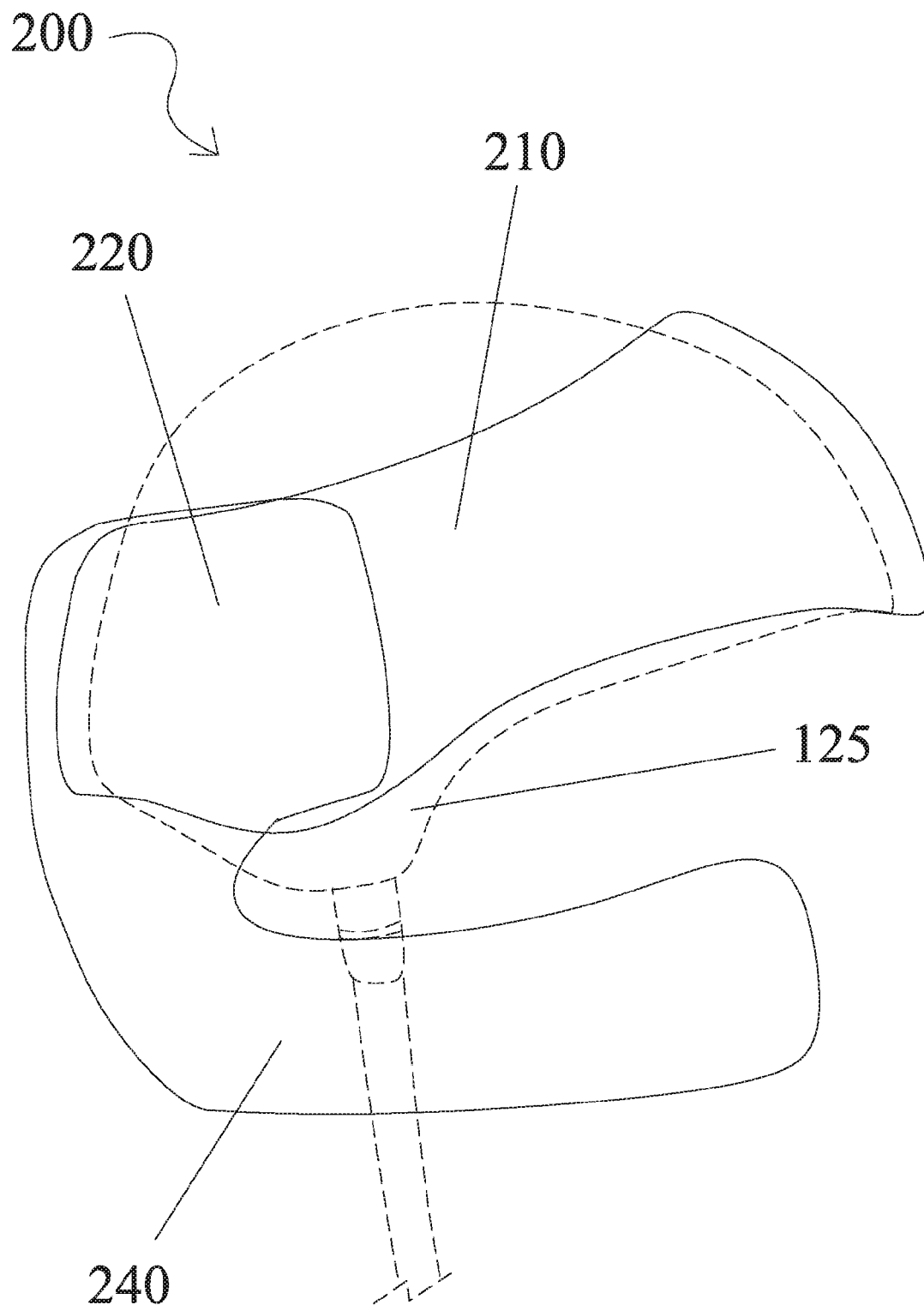


FIG. 8

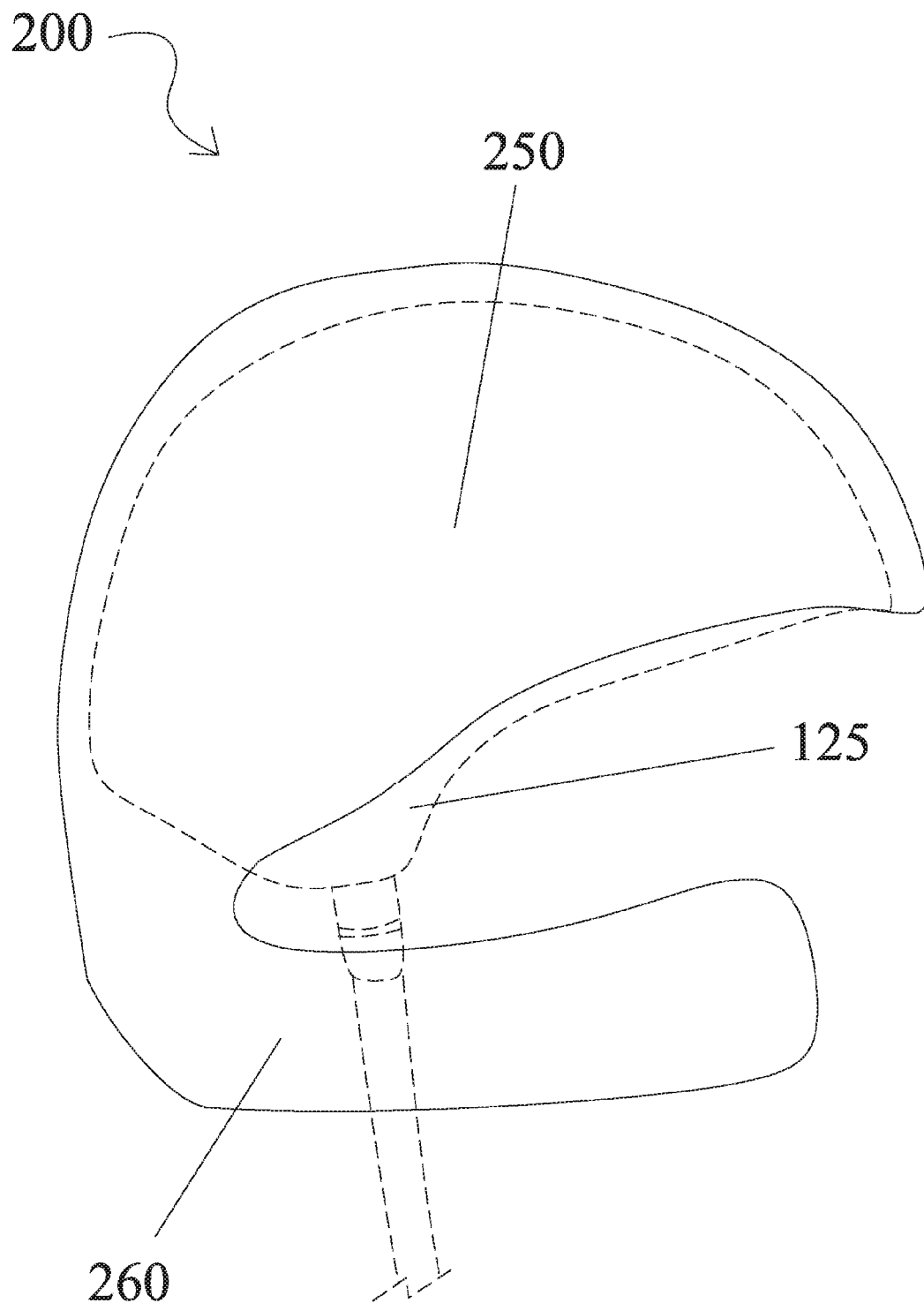


FIG. 9

EXTERNAL SHOCK ABSORBING PAD FOR PROTECTIVE HEADGEAR WITH A DISPLAY FUNCTION

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority and herein incorporates by reference U.S. provisional patent application 62286844, filed Jan. 25, 2016.

BACKGROUND OF THE INVENTION

[0002] Head injuries are very serious and most sports teams are spending a lot of time and money researching how to detect, prevent and treat concussions. In the past, preventative measures have mostly been concerned with helmets and other protective headgear that included interior padding and shock absorbing systems that are built in to the helmet.

[0003] Additionally, most helmets, especially among collegiate and professional organizations include logos that are displayed on the helmets. There is a need for an additional layer of protection for head injuries that allows the user to use the original helmet that does not conceal and logos or printing on the helmet.

SUMMARY OF THE INVENTION

[0004] An external shock absorbing pad for helmets with a display function has a transparent shock absorbing pad that externally covers a protective helmet to provide additional impact protection by absorbing kinetic energy during impact. The shock absorbing pad is transparent so that any team logos or graphics are still visible after application. An adhesive is applied to an inner surface of the pad allows a user to apply the pad to the exterior portion of the helmet. The user peels back a protective backing and then applies the pad to the helmet so that it follows the contours and shape of the helmet. The pad is made from a polyurethane plastic.

[0005] Other features and advantages of the instant invention will become apparent from the following description of the invention which refers to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 side view of an external shock absorbing pad for protective headgear with a display function adapted for use with a sports helmet according to an embodiment of the invention.

[0007] FIG. 2 is a side view of the external shock absorbing pad for protective headgear with a display function adapted for use with a bicycle helmet.

[0008] FIG. 3 is a side view of the external shock absorbing pad for protective headgear with a display function adapted for use with a driving helmet.

[0009] FIG. 4 is a side view of the external shock absorbing pad for protective headgear with a display function adapted for use with a football helmet.

[0010] FIG. 5 is a side view of the external shock absorbing pad for protective headgear with a display function shown in FIG. 3, with a thicker layer of padding.

[0011] FIG. 6 side view of an external shock absorbing pad for protective headgear with a display function adapted to cover only a portion of the protective headgear according to an embodiment of the invention.

[0012] FIG. 7 side view of the external shock absorbing pad for protective headgear with a display function shown in FIG. 6 with a supplemental shock absorbing layer with a neck protective flap.

[0013] FIG. 8 side view of the external shock absorbing pad for protective headgear with a display function shown in FIG. 6 with a supplemental shock absorbing layer with a neck and collar support portion.

[0014] FIG. 9 side view of an external shock absorbing pad for protective headgear with a display function and having an integrated neck and collar support portion.

DETAILED DESCRIPTION OF THE INVENTION

[0015] In the following detailed description of the invention, reference is made to the drawings in which reference numerals refer to like elements, and which are intended to show by way of illustration specific embodiments in which the invention may be practiced. It is understood that other embodiments may be utilized and that structural changes may be made without departing from the scope and spirit of the invention.

[0016] Referring to FIG. 1, a side view of a football helmet 120 equipped with an external shock absorbing pad for helmets with a display function is shown having a transparent shock absorbing pad 110 that is applied over football helmet 120. Shock absorbing pad 110 is made of a shock absorbing transparent plastic such as polyurethane. Shock absorbing pad 110 fits over helmet 120 whatever the shape of helmet 120. An adhesive layer is applied to the interior side of shock absorbing pad 110 that allows the user to apply shock absorbing pad 110 to any helmet to enhance the protection. The instant invention is designed to work with any protection already provided by helmet 120 and enhances the protection offered by helmet 120 without replacing it.

[0017] Now referring to FIGS. 2 and 9, a side view of a bicycle helmet 125 with an external shock absorbing pad 110 applied to bicycle helmet 125. Again an adhesive layer is applied to the interior surface of pad 110 that allows a user to peel off a protective backing and then apply to helmet 125 to form and shape it to smoothly fit thereon. In situations where additional support is desirable, a shock absorbing pad with additional neck and collar support 250 is shown having a neck and collar support portion 260 integrated therein.

[0018] Referring now to FIG. 3, a driving helmet used in racing, motorcycles and other similar helmets is shown with driving helmet 130 with transparent shock absorbing pad 110 covering helmet 130. Transparent shock absorbing pad 110 helps absorb kinetic energy during an impact which lessens the amount of energy transferred to the user. Although illustrated showing helmets, any protective headgear may be used with the instant invention such as a baseball cap or other head covering item. The thickness of transparent shock absorbing pad 110 may vary to match and balance the protective needs with user comfort and esthetics.

[0019] FIG. 4 illustrates a display function of the instant invention which allows a logo 150 to show through transparent shock absorbing pad 110. This allows sports teams to use current helmets and apply the extra protection afforded by the instant invention without covering over their logo 150.

[0020] Referring to FIG. 5, a shock absorbing pad 115 is thicker than the one shown in FIGS. 1-3 to provide additional protection by providing extra shock absorbing effect

by increasing the thickness of the layer. Of course other materials could be used such as, but not limited to shock absorbing gels, gas filled bladders, rubbers, etc. as long as they are transparent and are able to absorb and disperse kinetic energy during an impact.

[0021] Referring now to FIG. 6, a shock absorbing external shock absorbing pad for protective headgear with a display function 200 is shown having a shock absorbing pad 210 that covers only a portion of bicycle helmet 125. As discussed above, shock absorbing pad is transparent and includes a transparent adhesive to attach to bicycle helmet 125. This embodiment is useful for specific applications where the risk of injury is known to occur more often in a specific area with the protective layer being applied at the area of concern.

[0022] Referring to FIG. 7, a supplemental shock absorbing layer 220 is provided to provide additional protection in areas where the possibility of injury is more significant. In the embodiment shown, a neck flap 230 is shown to provide support and stabilization to the neck of the user.

[0023] Referring now to FIG. 8, supplemental shock absorbing layer 220 is provided as discussed above as well as a neck and collar support portion 240 to further provide additional protection in activities where additional support is desirable.

[0024] Although the instant invention has been described in relation to particular embodiments thereof, many other variations and modifications and other uses will become apparent to those skilled in the art.

What is claimed is:

1. A an external shock absorbing pad for protective headgear with a display function comprising:
 - a shock absorbing pad adapted to cover at least a portion of an exterior portion of a protective head gear;
 - said shock absorbing pad having an adhesive disposed on an interior portion thereon; and

said shock absorbing pad being transparent wherein said exterior portion of said protective head gear is visible.

2. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said protective headgear is a helmet.

3. The external shock absorbing pad for protective headgear with a display function according to claim 1 further comprising a neck flap portion that is adapted to support at least a portion of a neck.

4. The external shock absorbing pad for protective headgear with a display function according to claim 1 further comprising a neck and collar support portion adapted to support at least a portion of a neck and collar. S. The external shock absorbing pad for protective headgear with a display function according to claim 1 further comprising:

a supplemental shock absorbing layer adapted to attach to an outer portion of said shock absorbing pad wherein additional protection is provided; and

said supplemental shock absorbing layer having an adhesive applied to an interior portion thereon.

6. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said protective headgear is a helmet.

7. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said shock absorbing pad is a shock absorbent gel.

8. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said shock absorbing pad is a shock absorbent gas filled bladder.

9. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said shock absorbing pad is a shock absorbent rubber.

10. The external shock absorbing pad for protective headgear with a display function according to claim 1 wherein said shock absorbing pad is a polyurethane plastic.

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