



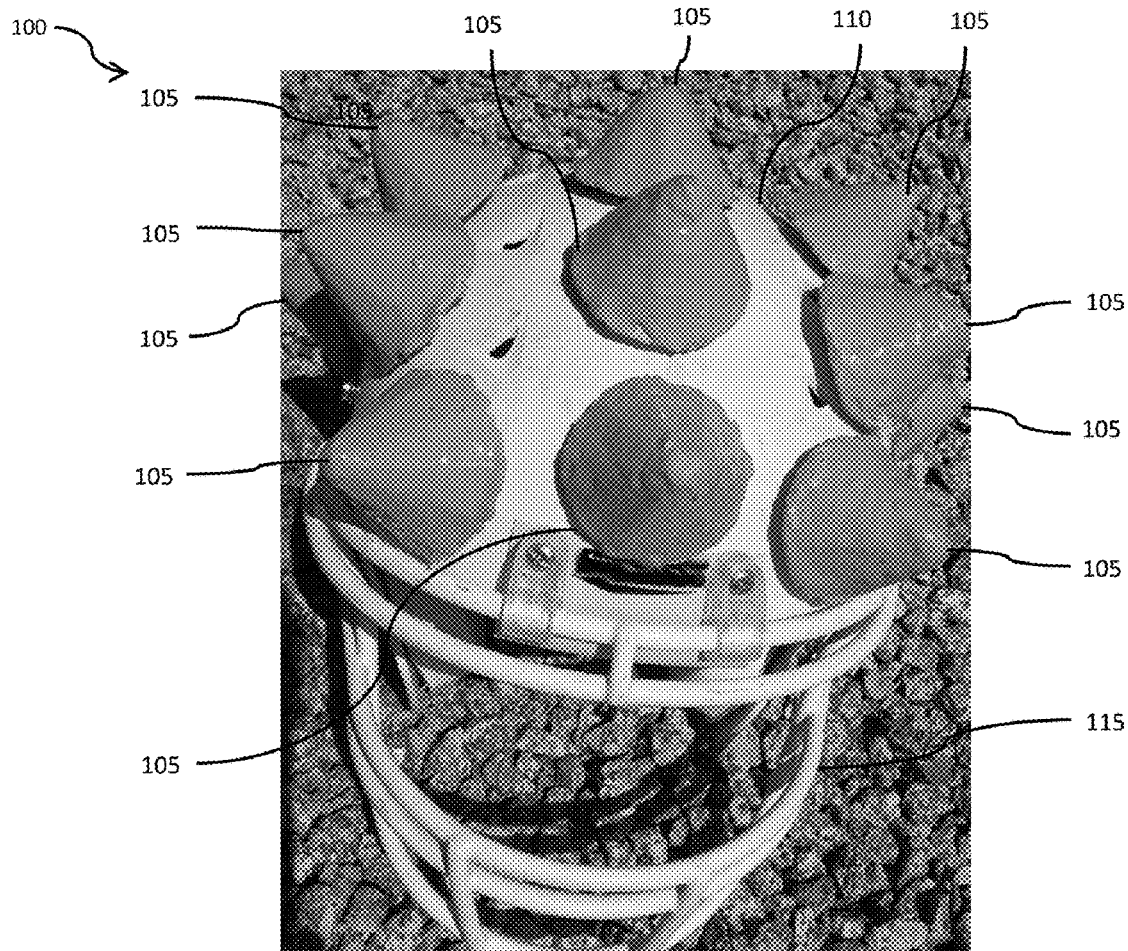
US 20170196290A1

(19) **United States**(12) **Patent Application Publication**
Scanlon(10) **Pub. No.: US 2017/0196290 A1**(43) **Pub. Date: Jul. 13, 2017**(54) **HEADGEAR PADS AND METHODS OF ATTACHMENT***A42B 1/08* (2006.01)*A42C 2/00* (2006.01)(71) Applicant: **Thomas M. Scanlon**, Cave Creek, AZ (US)(52) **U.S. Cl.**
CPC *A42B 3/062* (2013.01); *A42C 2/00* (2013.01); *A63B 71/10* (2013.01); *A42B 3/066* (2013.01); *A42B 1/08* (2013.01)(72) Inventor: **Thomas M. Scanlon**, Cave Creek, AZ (US)(21) Appl. No.: **15/418,517**(22) Filed: **Jan. 27, 2017****Related U.S. Application Data**

(60) Provisional application No. 62/387,921, filed on Jan. 12, 2016, provisional application No. 62/346,773, filed on Jun. 7, 2016.

Publication Classification(51) **Int. Cl.**
A42B 3/06 (2006.01)
A63B 71/10 (2006.01)(57) **ABSTRACT**

An apparatus for attachment to headgear is disclosed including a plurality of headgear pads each having a sloped shape, each headgear pad having a base, an apex and a sloped portion connected between the base and apex, wherein the base is adapted to be physically attached to the headgear. Also disclosed is a method for attaching a plurality of headgear pads to headgear for use by a wearer, the method including selecting a pattern for placement of the plurality of headgear pads onto the headgear, marking the headgear with the pattern, attaching a first headgear pad selected from a plurality of headgear pads to the headgear in accordance to the marking and continuing attaching headgear pads until the pattern is complete.



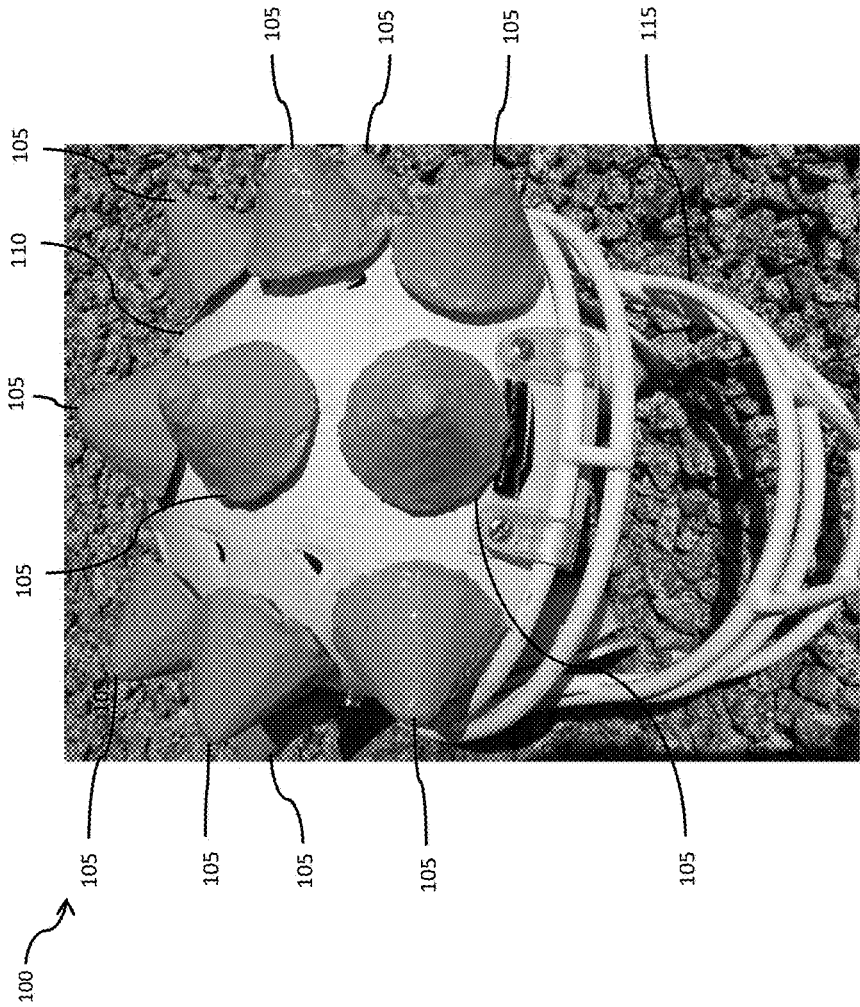


Fig. 1A

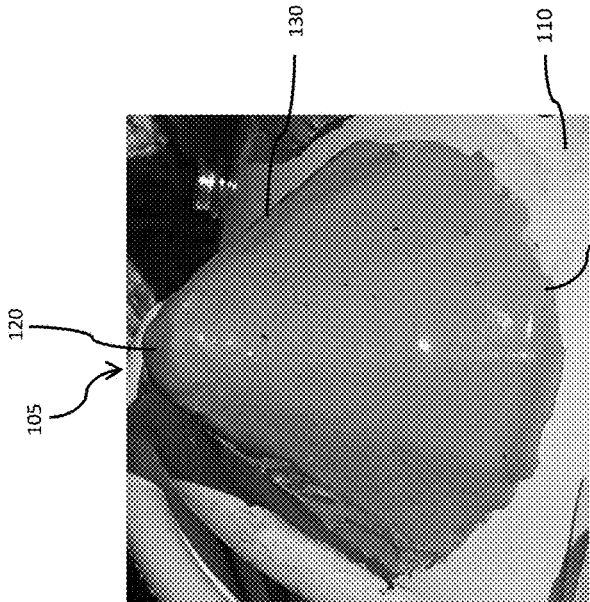


Fig. 1B

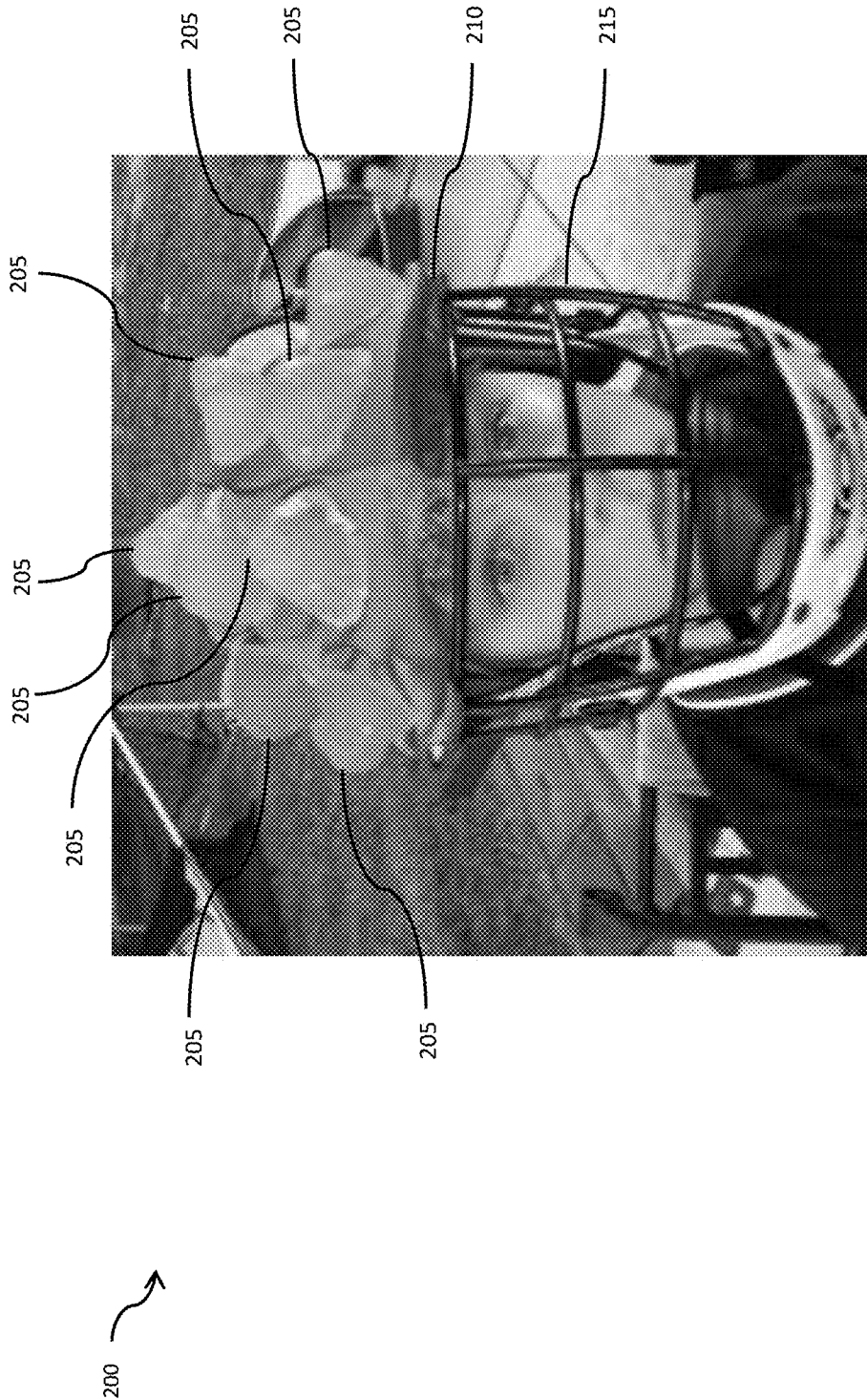


Fig. 2

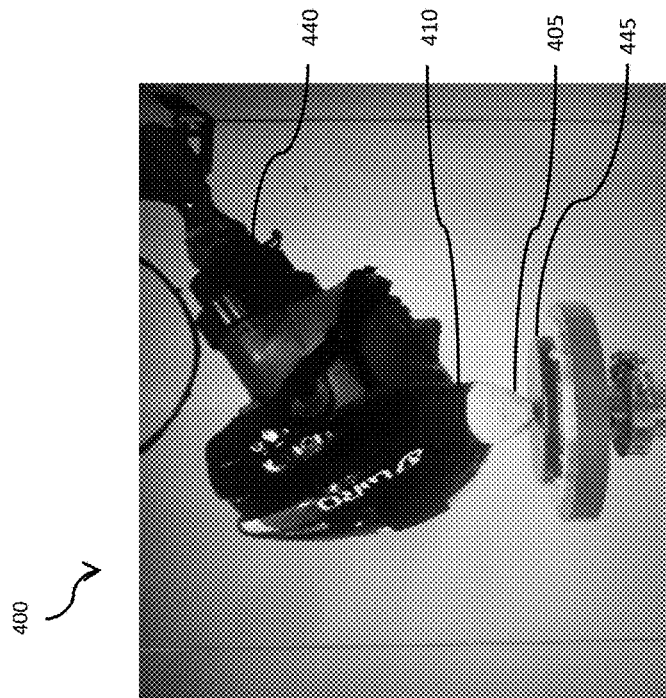


Fig. 3

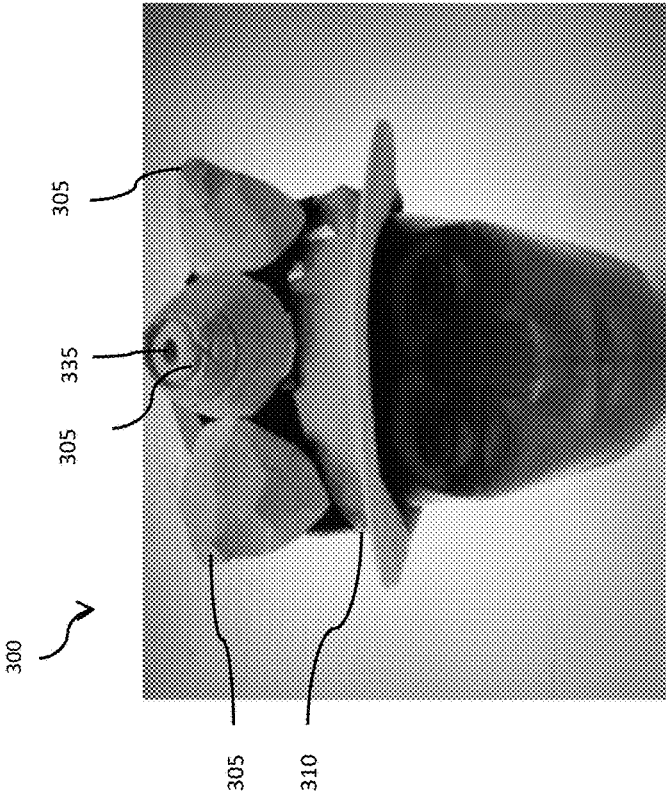


Fig. 4

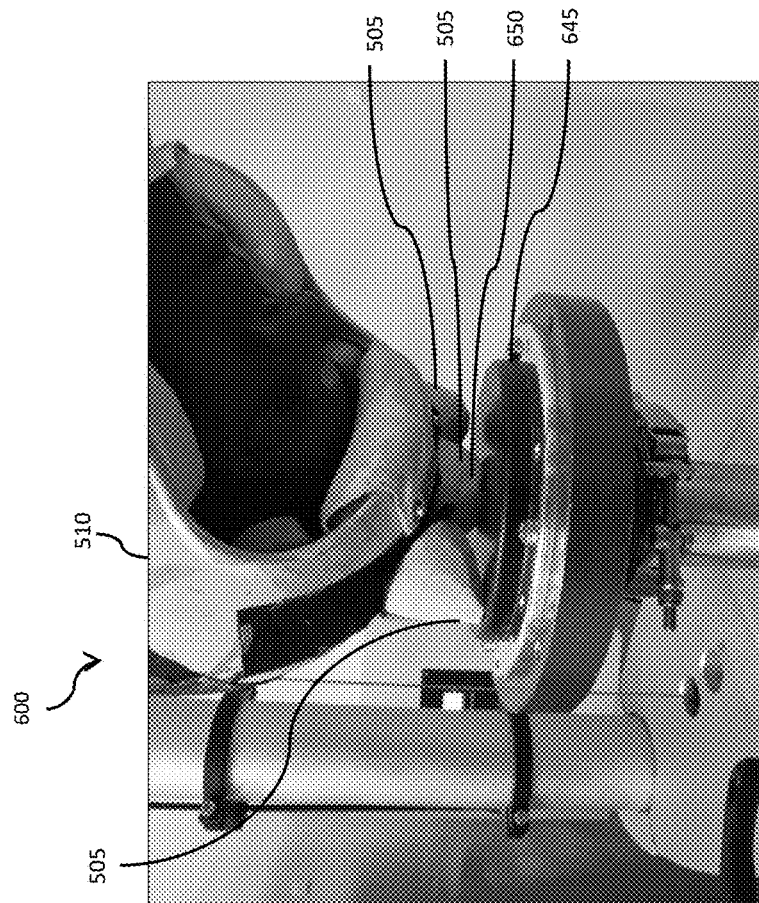


Fig. 5

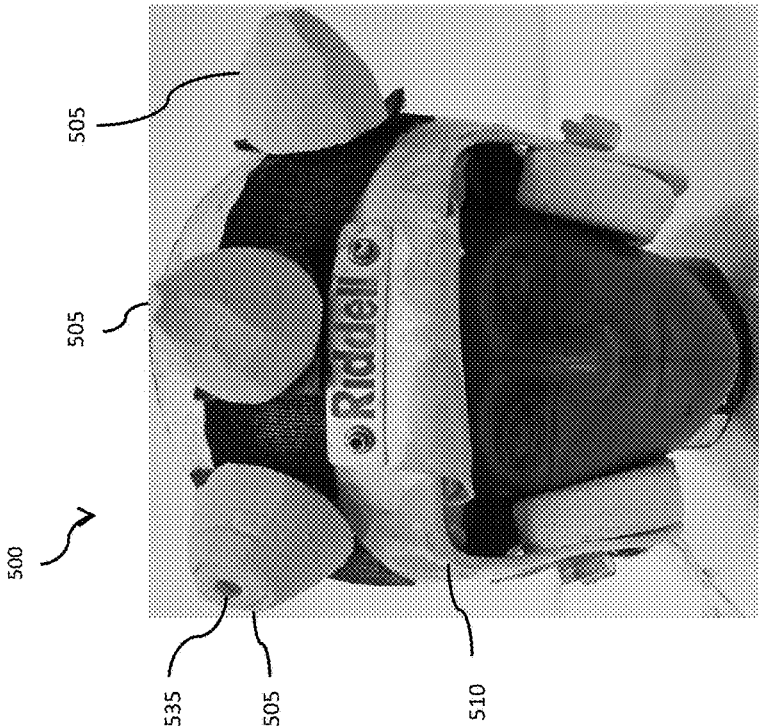


Fig. 6

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Page 1 of 2
Job Number: 2824-005

Impact Attenuation Testing: Sample Information									
Test ID:	Refined - Yellow	Weight:	2.61 lbs.	Color:	White				
Size:	Small	Manufacturer:	Safe Our Best	Date Received:	-				
Impact Attenuation Testing: Instrumentation / Equipment Setup									
* Sensitivity 2X:	10.693 m/s ²	Head Form Size:	NACS&I Small	Temperature:	72.5°F				
* Sensitivity 1X:	9.381 m/s ²	Head Form Size:	NACS&I 4965114	Humidity:	51.0%				
* Sensitivity 1/2X:	10.869 m/s ²	Test Filter:	CFC 2000 150000	Technician:	Sam Swartz				
*The resultant 31 for positions 1(X, Y, Z) on the head form must result in a 1.00% SD, 4.0%, when calibrating.									

Pre Test Equipment Check - Twin Wire Drop Tower Results									
Drop Number	Drop Height (Inches)	Test Location	Impact Velocity (ft/s)	Acceleration (G)	Severity Index (SI)	Comments			
Pre - 1	18.0	Front Boss	9.64	185.1	561.0	All impacts conducted against a 1/8" M.E.P. pad.			
Pre - 2	18.0	Front Boss	9.68	183.9	560.0				
Pre - 3	18.0	Front Boss	9.69	183.0	558.0				
Average:	18.0	-	9.70	184.1	559.7				

Post Test Equipment Check - Twin Wire Drop Tower Results									
Drop Number	Drop Height (Inches)	Test Location	Impact Velocity (ft/s)	Acceleration (G)	Severity Index (SI)	Comments			
Post - 1	18.0	Front Boss	9.69	187.5	579.0	All impacts conducted against a 1/8" M.E.P. pad.			
Post - 2	18.0	Front Boss	9.68	186.4	573.0				
Post - 3	18.0	Front Boss	9.68	185.8	571.0				
Average:	18.0	-	9.70	186.6	573.7				
*The difference between pre and post test average system checks shall not be greater than 7% for both Acceleration (G) and Severity Index (SI).									

Impact Attenuation Testing: Summary of Test Results - Ambient									
Impact Number	Test Surface	Test Location	Impact Velocity (ft/s)	Acceleration (G)	Severity Index (SI)	Strike Energy (J)			
1	18" 4808	Front	11.6	61.0	35.5	29.3			

Impact Attenuation Testing: Comments / Test Remarks									
This sample appears to be constructed of materials that are not known to cause skin irritation or disease. The head form used (H&D) was defined at inches for all impacts.									

Impact Attenuation Testing: Final Result									
Manufacturer	Model	Size	Compliance						
Safe Our Best	Football Helmet	Small	-						

Fig. 7A

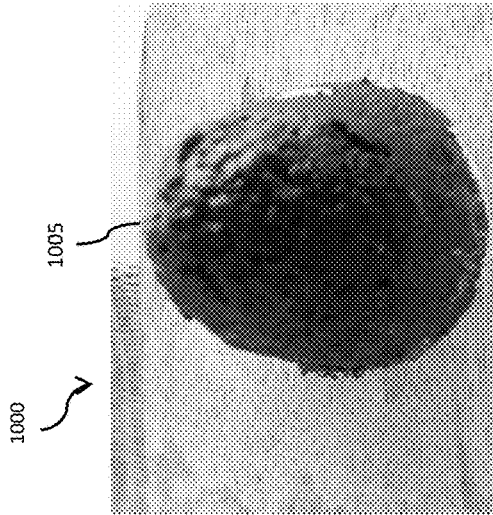


Fig. 10

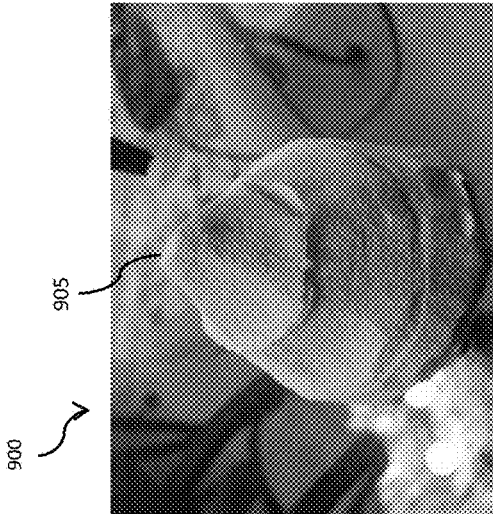


Fig. 9

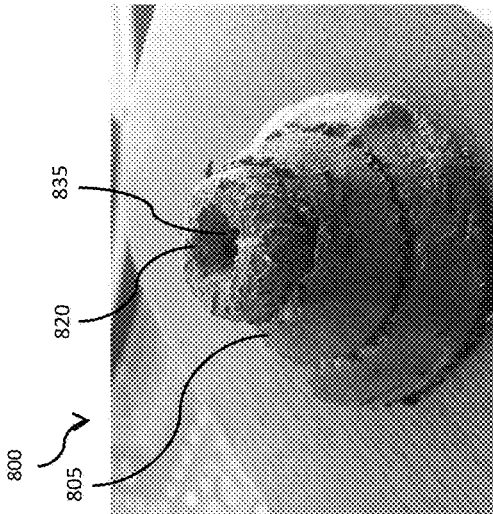


Fig. 8

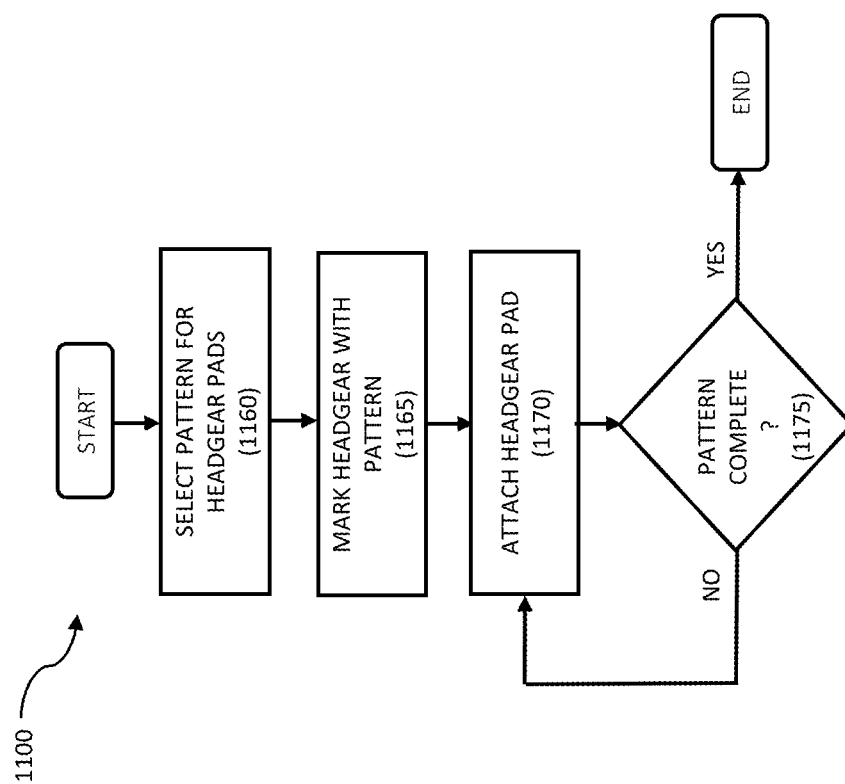


Fig.
11

HEADGEAR PADS AND METHODS OF ATTACHMENT

CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 62/387,921, filed Jan. 12, 2016, and U.S. Provisional Patent Application No. 62/346,773, filed Jun. 7, 2016. All prior applications are incorporated herein by reference in their entireties.

BACKGROUND

[0002] Field

[0003] The present disclosure relates generally to impact mitigation devices for headgear and their method for attachment. More specifically, the present invention relates to headgear pads physically connected to headgear to mitigate the effects of impact on a wearer, especially the effects on the wearer's brain.

[0004] Description of the Related Art

[0005] While various sports and physical activities are widely considered to have a variety of positive effects on their participants, unfortunately, science is increasingly recognizing the negative effects as well. That is especially true regarding those sports and physical activities that include a substantial chance of impact, especially impact to a participant's head. Some of the sports and physical activities known to cause large numbers of head injuries include bicycling, football, lacrosse, baseball, softball, basketball, water skiing, soccer, skateboarding, downhill skiing, snowboarding, hockey and horseback riding. While football often has a reputation for causing the greatest number of head injuries, it has been reported that bicycling leads to a greater number of head injuries treated in U.S. hospital emergency rooms. However, the precise impact of concussive and sub-concussive impacts over time is still in the early stages of study.

[0006] Although many sports have adopted strict helmet standards for their participants, and superficial cuts and bruises are correspondingly reduced, impacts to the head are still known to cause large numbers of cases of traumatic brain injury (TBI), including concussions and Chronic Traumatic Encephalopathy (CTE). The problem is so widespread that according to a press release from the Centers for Disease Control and Prevention (CDC) in 2007, "experts estimate that 1.6 to 3.8 million sports and recreation-related TBIs occur each year in the U.S." A subsequent study led by Dr. Alan Zhang of the University of California, in San Francisco, Calif., reviewed health insurance claims for almost 9 million Americans and found that concussion diagnoses more than doubled between 2007 and 2014. The most significant jump was seen among 10- to 14-year-olds, whose injury rate more than tripled, and they were followed closely by 15- to 19-year-olds, the study found.

[0007] Concussion injuries are associated with rapid acceleration due to impact. While the brain is protected from light trauma by being surrounded by cerebrospinal fluid, there are limits to this protection that are often exceeded in sports and physical activities that cause the head to accelerate rapidly. Rapid acceleration can cause linear, rotational, angular and perhaps even wave-like movement of the brain. Concussion is caused by impact forces, in which the head encounters something at high speed, and impulsive forces,

such as if a participant's headgear-covered head hits something and their head snaps forward or backward. There may also be instances where the force imparted is great enough to cause the brain to impact the side of the skull. Depending on the circumstances, concussion causes short term, and sometimes long term, cognitive symptoms including confusion, disorientation, difficulty focusing attention, changes in sleeping patterns, difficulty reasoning and performing everyday activities. Receiving a second concussion or subsequent concussion before the first concussion is completely healed has also been associated with long term damage. Additionally, the long-term damage of repeated, sub-concussive blows to the head is only recently being revealed. A 2010 Purdue study of high school football players concluded, "[p]layers sustaining the most sub-concussive hits (were) most likely to show cognitive impairment."

[0008] While concussions are now widely known to be damaging, CTE, as a result of sports trauma, is also coming under increasing scrutiny. CTE was first described by Dr. Bennet Omalu in his paper titled, "Chronic Traumatic Encephalopathy in a National Football League Player," published in the journal *Neurosurgery* in 2005. Subsequently, Boston University established a CTE center to further study the problem. It has been reported that Boston University has identified signs of CTE in nearly 60 former professional football players when their brains were analyzed postmortem. CTE is thought to be caused by repeated blows to the head, which damage brain tissue and lead to a buildup of an abnormal protein called tau.

[0009] Concerns about traumatic brain injury are likely negatively affecting participation in otherwise beneficial sports and physical activities at all levels. For example, a survey conducted by the University of Pittsburgh Medical Center in October 2015 found that 1 in 3 parents "live in fear that their child will get a concussion" and that 1 in 4 "do not let their kids play some contact sports because of fear of concussion." For those who choose to participate, the risks of traumatic brain injury are a serious and legitimate concern. Unfortunately, helmets, caps and other headgear are clearly not preventing concussions, significant sub-concussive impacts and other events contributing to brain trauma.

[0010] In view of the foregoing, it would be beneficial to mitigate the forces imparted to the brains of participants in sports and physical activities.

SUMMARY

[0011] In some embodiments, the present disclosure describes headgear pads and methods of attachment.

[0012] In some embodiments, the present disclosure describes an apparatus for attachment to headgear including a plurality of headgear pads each having a sloped shape, each headgear pad having a base, an apex and a sloped portion connected between the base and apex, wherein the base is adapted to be physically attached to the headgear.

[0013] In some embodiments, the present disclosure describes an apparatus for attachment to headgear including a plurality of headgear pads each having a conical shape, each headgear pad having a base, an apex and a sloped portion connected between the base and apex, wherein the base is adapted to be physically attached to the headgear.

[0014] In some other embodiments, the present disclosure describes a method for attaching a plurality of headgear pads to headgear for use by a wearer, the method including selecting a pattern for placement of the plurality of headgear

pads onto the headgear, marking the headgear with the pattern, attaching a first headgear pad selected from a plurality of headgear pads to the headgear in accordance to the marking and continuing attaching headgear pads until the pattern is complete.

[0015] Other features will be apparent from the description, drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The figures depict embodiments for purposes of illustration only. One skilled in the art will readily recognize from the following description that alternative embodiments of the structures illustrated herein may be employed without departing from the principles described herein, wherein:

[0017] FIG. 1A is a perspective view of an embodiment of a plurality of headgear pads attached to a football helmet, according to the present disclosure;

[0018] FIG. 1B is a close-up, perspective view of an embodiment of one headgear pad attached to the football helmet from FIG. 1A, according to the present disclosure;

[0019] FIG. 2 is a perspective view of an embodiment of a plurality of headgear pads attached to a lacrosse helmet worn by a user, according to the present disclosure;

[0020] FIG. 3 is a perspective view of an embodiment of a plurality of headgear pads attached to a baseball cap, according to the present disclosure;

[0021] FIG. 4 is a perspective view of an embodiment of a headgear pad attached to a bicycle helmet for testing purposes, according to the present disclosure;

[0022] FIG. 5 is a perspective view of an embodiment of a plurality of headgear pads attached to a football helmet for testing purposes, according to the present disclosure;

[0023] FIG. 6 is a perspective view of an embodiment of the plurality of headgear pads attached to the football helmet of FIG. 5 for testing purposes, according to the present disclosure;

[0024] FIG. 7A is a first chart of results of impact testing corresponding to the embodiment of the plurality of headgear pads attached to the football helmet of FIG. 6, according to the present disclosure;

[0025] FIG. 7B is a second chart of results of impact testing corresponding to the embodiment of the plurality of headgear pads attached to the football helmet of FIG. 6, according to the present disclosure;

[0026] FIG. 8 is a close-up, perspective view of an embodiment of one headgear pad, according to the present disclosure;

[0027] FIG. 9 is a close-up, perspective view of an embodiment of one headgear pad attached to the football helmet from FIG. 5, according to the present disclosure;

[0028] FIG. 10 is a close-up, perspective view of an embodiment of one headgear pad, according to the present disclosure; and

[0029] FIG. 11 is a flowchart of an embodiment of attachment of a plurality of headgear pads, according to the present disclosure.

DETAILED DESCRIPTION

[0030] The following description and drawings are illustrative and are not to be construed as limiting. Numerous specific details are described to provide a thorough understanding of the disclosure. However, in certain instances,

well known or conventional details are not described in order to avoid obscuring the description.

[0031] Reference in this specification to “one embodiment,” “an embodiment” or the like means that a particular feature, structure, characteristic, advantage or benefit described in connection with the embodiment may be included in at least one embodiment of the disclosure, but may not be exhibited by other embodiments. The appearances of the phrase “in one embodiment” in various places in the specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments mutually exclusive of other embodiments. Similarly, various requirements are described which may be requirements for some embodiments but not for other embodiments. The specification and drawings are to be regarded in an illustrative sense rather than a restrictive sense. Various modifications may be made thereto without departing from the spirit and scope as set forth in the claims.

[0032] Described herein are example embodiments of headgear pads and methods for attaching headgear pads to headgear to reduce the effects of impact to a headgear wearer. The examples discussed herein are intended to be illustrative only to assist in explanation of the apparatuses, devices, systems and methods described. Features or components shown in the drawings or discussed below should not be taken as mandatory for any specific implementation of any of these the apparatuses, devices, systems or methods unless specifically designated as mandatory. For ease of reading and clarity, certain components, modules, or methods may be described solely in connection with a specific figure. Any failure to specifically describe a combination or sub-combination of components should not be understood as an indication that any combination or sub-combination is not envisioned. Also, for any methods described, regardless of whether the method is described in conjunction with a flow chart, it should be understood that unless otherwise specified or required by context, any explicit or implicit ordering of steps performed in the execution of a method does not imply that those steps must be performed in the order presented but instead may be performed in a different order or in parallel.

[0033] Referring to FIG. 1A, a perspective view of an embodiment of a plurality of headgear pads attached to a football helmet 100, according to the present disclosure, is shown. More specifically, the plurality of headgear pads attached to a football helmet 100 includes a plurality of headgear pads 105 each attached to a football helmet 110. The football helmet 110 is a type of headgear used by football participants and includes a facemask 115. As shown in FIG. 1A, each headgear pad 105 is conical in shape.

[0034] FIG. 1B is a close-up, perspective view of an embodiment of one headgear pad attached to the football helmet from FIG. 1A, according to the present disclosure. In some embodiments, the headgear pad 105 includes an apex 120, a base 125 and a sloped portion 130. In some embodiments, the apex 120 is a sharp point. In some embodiments, the apex 120 is rounded. In some embodiments, the apex 120 is a hollow point. In some embodiments, the apex 120 is a semi-hollow point having a depth of less than the height of the headgear pad 105. In some embodiments, the apex 120 is a hollow point having a depth equal to the height of the headgear pad 105. In some embodiments, the apex 120 is solid and does not contain an aperture in the headgear pad 105. The apex 120 is connected to the base 125 by the sloped

portion 130. In some embodiments, the base 125 is concave to approximate the curvature of the helmet the headgear pad 105 is designed to be attached to, as shown here, the football helmet 110. In some embodiments, the base 125 is flat. In some embodiments, each headgear pad 105 is conical in shape. In some embodiments, each headgear pad 105 is pyramidal in shape. In some embodiments, each headgear pad 105 is hemispherical in shape. In some embodiments, the base 125 ranges in diameter from 0.5 to 2 inches, but the headgear pads 105 are not limited to any particular size or range of sizes. In some embodiments, a distance between a center of the base 125 and the apex 120 ranges from 0.5 to 2 inches, but the headgear pads 105 are not limited to any particular size or range of sizes. In some embodiments, the sloped portion 130 forms a 45 degree slope angle, but the headgear pads 105 are not limited to any particular slope angle or range of slope angles.

[0035] In some embodiments, the headgear pad 105 is made from materials selected from polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances. As shown in FIG. 1A and FIG. 1B, the headgear pads 105 are made of rubber. In some embodiments, the headgear pad 105 is made from various combinations of polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances. The headgear pads 105 are not limited to a particular material or combination of materials other than those materials be similarly deformable to absorb at least some of a force of impact.

[0036] In some embodiments, the headgear pad 105 is attached to various types of helmets, such as helmets designed for bicycling, football, lacrosse, baseball, softball, basketball, water skiing, soccer, skateboarding, downhill skiing, snowboarding, hockey, and horseback riding, but the headgear pad is not limited to any particular type of helmet. In some embodiments, the headgear pad 105 is attached to other forms of headgear such as caps, including baseball caps and scrimmage caps. In some embodiments, the headgear pad 105 is attached to a helmet using one or more of adhesives, double-sided tape, Velcro, glue, straps and bolts, but the headgear pad is not limited to any particular form of attachment. In some embodiments, the headgear pad 105 is attached to a cap using one or more of adhesives, double-sided tape, Velcro, glue, straps and bolts, but the headgear pad is not limited to any particular form of attachment.

[0037] In some embodiments, the headgear pad 105 is pyramidal in shape. In some embodiments, the headgear pad 105 is formed into a "sloped shape" with a proximal end physically attached to headgear and a distal end furthest from the headgear. With regard to a conical shape, the proximal end of a headgear pad 105 is the base 125 and the distal end is the apex 120. With regard to the sloped shape, the proximal end of a headgear pad 105 is larger than the distal end.

[0038] Referring to FIG. 2, a perspective view of an embodiment of a plurality of headgear pads attached to a lacrosse helmet worn by a user 200, according to the present disclosure, is shown. More specifically, the plurality of headgear pads attached to a lacrosse football helmet 200 includes a plurality of headgear pads 205 each attached to a scrimmage cap covering the upper surface of a lacrosse football helmet 210. The lacrosse football helmet 210

includes a facemask 215. As shown in FIG. 2, the headgear pads 205 are made of jelled substance.

[0039] Referring to FIG. 3, a perspective view of an embodiment of a plurality of headgear pads attached to a baseball cap 300, according to the present disclosure, is shown. More specifically, the plurality of headgear pads attached to a baseball cap 300 includes a plurality of headgear pads 305 each attached to a baseball cap 310. As shown in FIG. 3, the headgear pads 305 are made of polyurethane memory foam and attached with Velcro. In some embodiments, the headgear pads 305 include an aperture 335 passing partway through the headgear pads. Note that the configuration of three headgear pads 305 on the baseball cap 310 shown in FIG. 3 is designed for testing.

[0040] Referring to FIG. 4, a perspective view of an embodiment of a headgear pad attached to a bicycle helmet for testing purposes 400, according to the present disclosure, is shown. More specifically, the headgear pad attached to a bicycle helmet for testing purposes 400 includes a single headgear pad 405 attached to bicycling helmet 410. As shown in FIG. 4, the headgear pad 405 is made of a lightweight plastic mix. Note that the configuration of headgear pads 405 on the bicycling helmet 410 shown in FIG. 4 is designed for testing. The helmet 410 is connected to testing apparatus 440 designed to cause the headgear pad 405 attached to the helmet 410 to impact a testing anvil 445.

[0041] Referring to FIG. 5, a perspective view of an embodiment of a plurality of headgear pads attached to a football helmet for testing purposes 500, according to the present disclosure, is shown. More specifically, the plurality of headgear pads attached to a football helmet for testing purposes 500 includes three headgear pads 505 attached to football helmet 510. As shown in FIG. 5, the headgear pads 505 are made of polyurethane memory foam and attached to the football helmet 510 with Velcro. Note that the configuration of headgear pads 505 shown in FIG. 5 is designed for testing. One helmet pad 510 includes an aperture 535 at its apex.

[0042] Referring to FIG. 6, a perspective view of an embodiment of the plurality of headgear pads attached to the football helmet of FIG. 5 for testing purposes 600, according to the present disclosure, is shown. More specifically, the plurality of headgear pads attached to the football helmet of FIG. 5 for testing purposes 600 includes three headgear pads 505 attached to football helmet 510. As shown in FIG. 6, the headgear pads 505 are made of polyurethane memory foam and attached to the helmet 510 with Velcro. Note that the configuration of headgear pads 505 shown in FIG. 6 is being tested by being impacted against a test anvil 645 which is causing one of the headgear pads 650 to be compressed as shown in FIG. 6 due to an impact of the type encountered in football. During such impacts, some of the force that would have been transmitted to the wearer's brain, potentially causing TBI, including concussions and/or CTE, is instead absorbed by the deformation of the headgear pads 505. Note that the headgear pads 505, other than headgear pad 650, may or may not be compressed as shown in this test in FIG. 6.

[0043] Referring to FIG. 7A, a first chart of results of impact testing 700 corresponding to the embodiment of the plurality of headgear pads attached to the football helmet of FIG. 6, according to the present disclosure, is shown. The testing was performed by Chesapeake Testing, an independent testing laboratory located at 4603B Compass Point

Road, Belcamp, Md. 21017. The first chart **700** shows a Severity Index (SI) 755 of 68. This corresponds to a 56% reduction in impact severity of the helmet **510** with headgear pads **505** having an SI of 68 as compared with the helmet **510** without helmet pads having an SI of 156. Severity Index is standard defined by the National Operating Committee on Standards for Athletic Equipment (NOCSAE). According to NOCSAE, "NOCSAE's Severity Index (SI) is a threshold value for a general category of head injuries based on scientific research and published data. SI is a method for measuring a helmet's ability to reduce impact forces to the head, integrating acceleration over time. SI provides an accurate way to assess head injury risk that can be replicated across laboratories and under different impact scenarios. NOCSAE standards are performance-based and are design neutral so that manufacturers are not restricted in design or engineering, allowing innovation in design." (<http://nocsae.org/wp-content/uploads/2011/10/NOCSAE-Severity-Index-FAQs-1-2015.pdf>)

[0044] Referring to FIG. 7B, a second chart of results of impact testing **700** corresponding to the embodiment of the plurality of headgear pads attached to the football helmet of FIG. 6, according to the present disclosure, is shown. The second chart **700** shows a Severity Index (SI) 755 of 68, corresponding to a 56% reduction in Severity Index (SI) as described above. This NOCSAE-compliant test result demonstrates a substantial reduction in impact forces due to the deformation of the headgear pads **505** absorbing those forces, thereby reducing the risk of TBI, including concussion and CTE.

[0045] Referring to FIG. 8, a close-up, perspective view of an embodiment of one headgear pad **800**, according to the present disclosure, is shown. The headgear pad **805** is formed from polyurethane flexible form. The headgear pad **805** has an apex **820** containing an aperture **835**.

[0046] Referring to FIG. 9, a close-up, perspective view of an embodiment of one headgear pad **900** attached to the football helmet from FIG. 5, according to the present disclosure, is shown. The headgear pad **905** is formed of polyurethane memory foam.

[0047] Referring to FIG. 10, a close-up, perspective view of an embodiment of one headgear pad **1000**, according to the present disclosure, is shown. The headgear pad **1005** is formed of medium density plastic with rubber coating.

[0048] Referring to FIG. 11, a flowchart of an embodiment of attachment of a plurality of headgear pads, according to the present disclosure, is shown. The method includes selecting pattern for placement of headgear pads onto a headgear **1160**, marking the headgear with that pattern **1165**, attaching a headgear pad selected from a plurality of headgear pads to the headgear in accordance to the marking **1170** and continuing attaching headgear pads until the pattern is complete **1175**. In some embodiments, the pattern is designed such that each headgear pad contacts at least one other headgear pad. In some other embodiments, the pattern is designed such that some headgear pads do not contact any other headgear pads. In some other embodiments, the pattern is designed such that no headgear pads contact any other headgear pads.

[0049] Some embodiments include an apparatus for attachment to headgear including a plurality of headgear pads each having a sloped shape, each headgear pad having

a base, an apex and a sloped portion connected between the base and apex, wherein the base is adapted to be physically attached to the headgear.

[0050] Some other embodiments include an apparatus for attachment to headgear including a plurality of headgear pads each having a conical shape, each headgear pad having a base, an apex and a sloped portion connected between the base and apex, wherein the base is adapted to be physically attached to the headgear.

[0051] Some still other embodiments include a method for attaching a plurality of headgear pads to headgear for use by a wearer, the method including selecting a pattern for placement of the plurality of headgear pads onto the headgear, marking the headgear with the pattern, attaching a first headgear pad selected from a plurality of headgear pads to the headgear in accordance to the marking and continuing attaching headgear pads until the pattern is complete.

[0052] It will be understood that various modifications can be made to the embodiments of the present disclosure herein without departing from the spirit and scope thereof. Therefore, the above description should not be construed as limiting the disclosure, but merely as embodiments thereof. Those skilled in the art will envision other modifications within the scope and spirit of the invention as defined by the claims appended hereto.

What is claimed is:

1. An apparatus for attachment to headgear, comprising: a plurality of headgear pads having a sloped shape, each headgear pad having a base, an apex and a sloped portion connected between the base and the apex, wherein the base is adapted to be physically attached to the headgear.
2. The apparatus for attachment to headgear of claim 1, wherein at least one headgear pad is conical in shape.
3. The apparatus for attachment to headgear of claim 1, wherein at least one headgear pad is selected from one of pyramidal and hemispherical in shape.
4. The apparatus for attachment to headgear of claim 1, wherein the base of at least one headgear pad is concave.
5. The apparatus for attachment to headgear of claim 1, wherein the base of at least one headgear pad is flat.
6. The apparatus for attachment to headgear of claim 1, wherein the apex of at least one headgear pad is a sharp point.
7. The apparatus for attachment to headgear of claim 1, wherein the apex of at least one headgear pad is rounded.
8. The apparatus for attachment to headgear of claim 1, wherein the apex of at least one headgear pad contains an aperture.
9. The apparatus for attachment to headgear of claim 1, wherein at least one headgear pad is formed from a material selected from one of polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances.
10. The apparatus for attachment to headgear of claim 1, wherein at least one headgear pad is formed from a material selected from at least two of polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances.
11. An apparatus for attachment to headgear, comprising: a plurality of headgear pads having a conical shape, each headgear pad having a base, an apex and a sloped

portion connected between the base and the apex, wherein the base is adapted to be physically attached to the headgear.

12. The apparatus for attachment to headgear of claim **11**, wherein the base of at least one headgear pad is concave.

13. The apparatus for attachment to headgear of claim **11**, wherein the base of at least one headgear pad is flat.

14. The apparatus for attachment to headgear of claim **11**, wherein the apex of at least one headgear pad is a sharp point.

15. The apparatus for attachment to headgear of claim **11**, wherein the apex of at least one headgear pad is rounded.

16. The apparatus for attachment to headgear of claim **11**, wherein the apex of at least one headgear pad contains an aperture.

17. The apparatus for attachment to headgear of claim **11**, wherein at least one headgear pad is formed from a material selected from one of polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances.

18. The apparatus for attachment to headgear of claim **11**, wherein at least one headgear pad is formed from a material

selected from at least two of polyurethane foam (flexible), polyurethane foam (memory), urethane, plastic with rubber coating, medium weight plastic, a lightweight plastic mix, rubber and jelled substances.

19. A method for attaching a plurality of headgear pads to headgear for use by a wearer, the method comprising the steps of:

selecting a pattern for placement of the plurality of headgear pads onto the headgear;

marking the headgear with the pattern;

attaching a first headgear pad selected from a plurality of headgear pads to the headgear in accordance to the marking; and

continuing attaching headgear pads until the pattern is complete.

20. The method for attaching a plurality of headgear pads to headgear for use by a wearer of claim **19**, wherein the pattern specifies each headgear pad is conical and to be placed in contact with at least one other headgear pad onto the headgear.

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