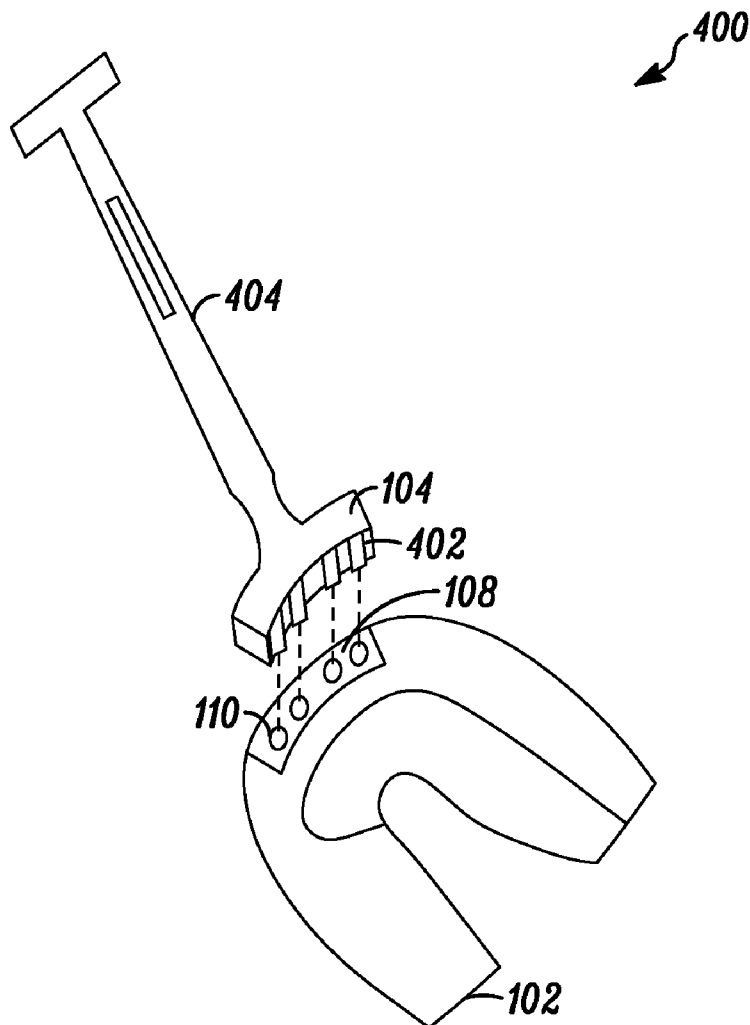




US 20130081640A1

(19) **United States**(12) **Patent Application Publication**
Herman et al.(10) **Pub. No.: US 2013/0081640 A1**(43) **Pub. Date: Apr. 4, 2013**(54) **INTERCHANGEABLE MOUTHGUARD
COMPONENT SYSTEM****Publication Classification**(75) Inventors: **Mark H. Herman**, Minneapolis, MN
(US); **William Cook**, Lakeville, MN
(US)(51) **Int. Cl.**
A63B 71/08 (2006.01)
(52) **U.S. Cl.**
CPC **A63B 71/085** (2013.01)
USPC **128/861**(73) Assignee: **BITE TECH, INC.**, Norwalk, CT (US)(21) Appl. No.: **13/701,476**(57) **ABSTRACT**(22) PCT Filed: **Jun. 1, 2011**(86) PCT No.: **PCT/US2011/038778**§ 371 (c)(1),
(2), (4) Date: **Nov. 30, 2012****Related U.S. Application Data**(60) Provisional application No. 61/350,231, filed on Jun.
1, 2010, provisional application No. 61/350,243, filed
on Jun. 1, 2010.

Embodiments relate to an interchangeable mouthguard component system. The system includes a mouthguard base with a receiving recess positioned within at least a front surface of the base, a securely attachable mouthguard component positioned to fit within the recess, one or more attaching posts positioned on one of the recess or component and one or more holes positioned opposite the posts on either the recess or component. The mouthguard component, when attached, is positioned sufficient to maintain a substantially flush front surface of the base.



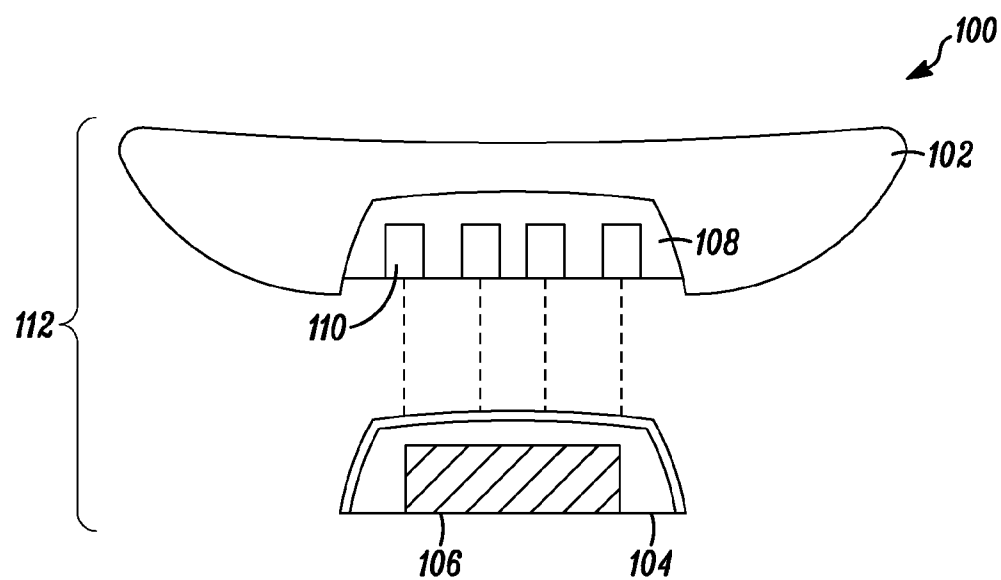


FIG. 1

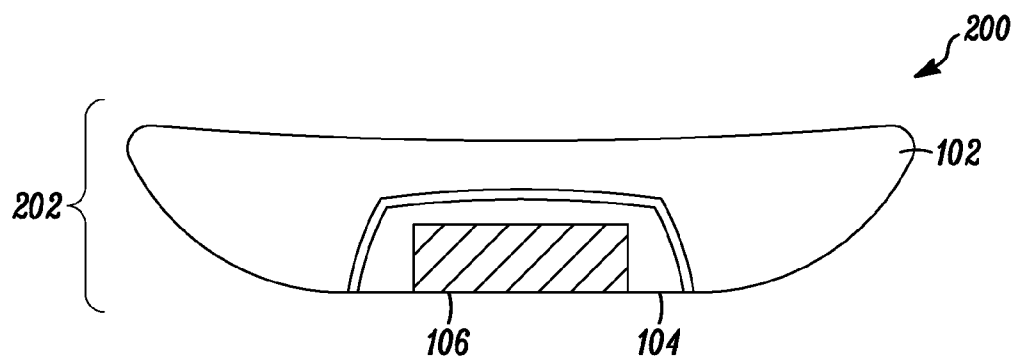


FIG. 2

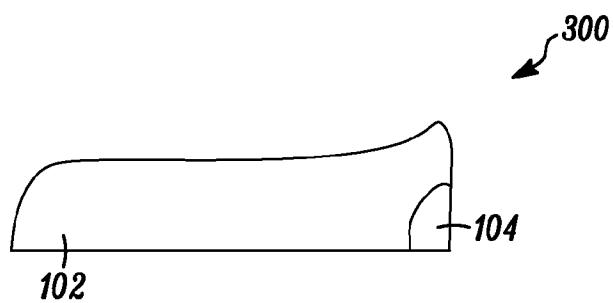


FIG. 3

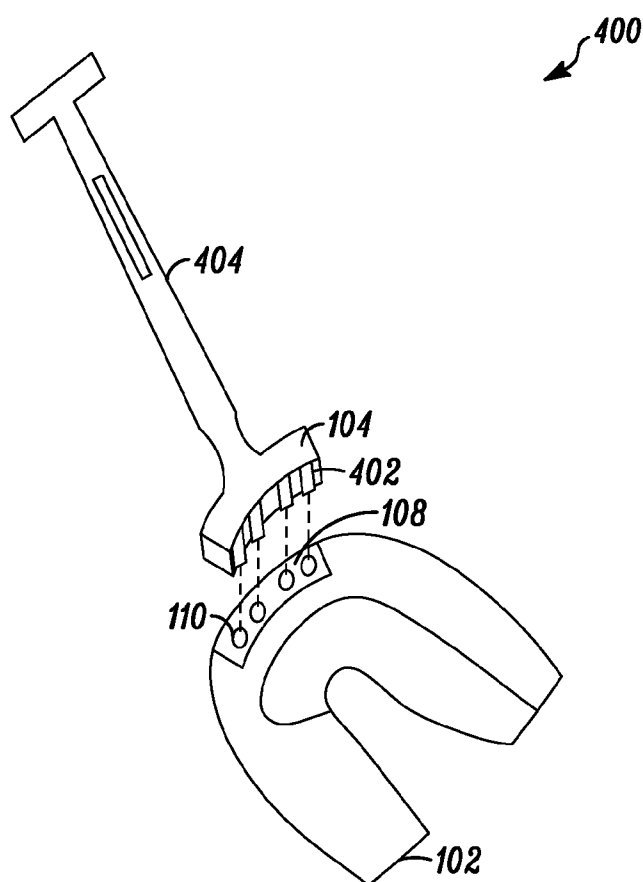


FIG. 4

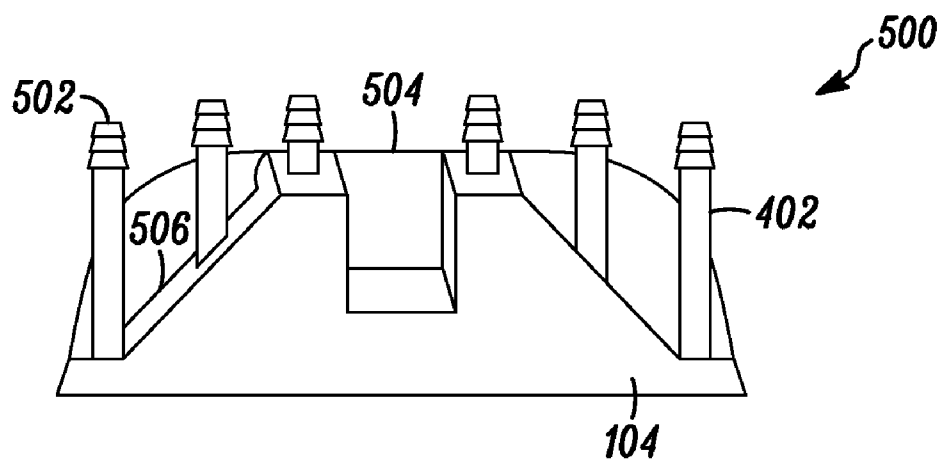


FIG. 5

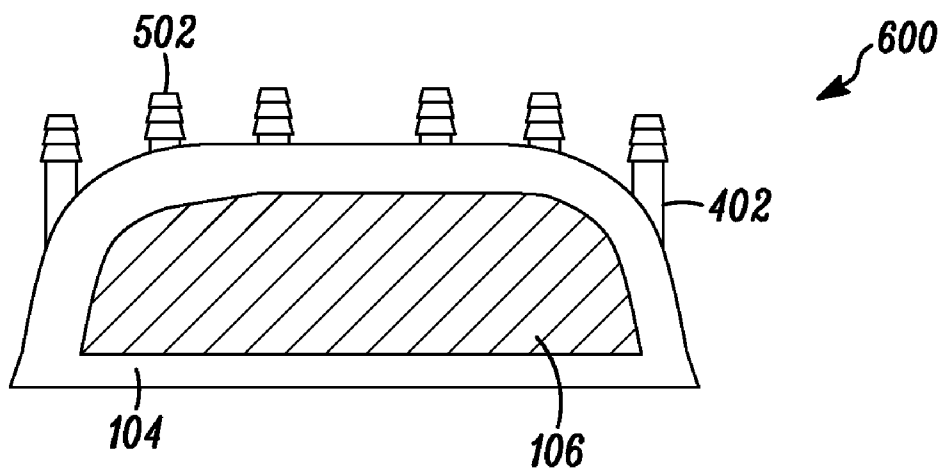


FIG. 6

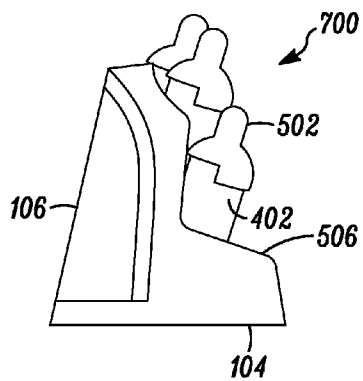


FIG. 7

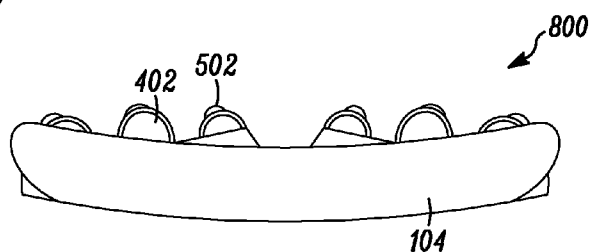


FIG. 8

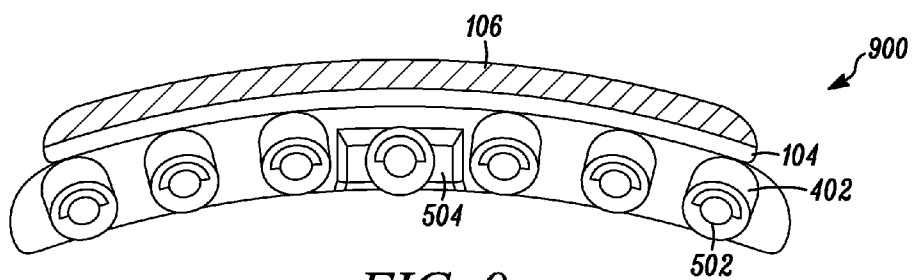


FIG. 9

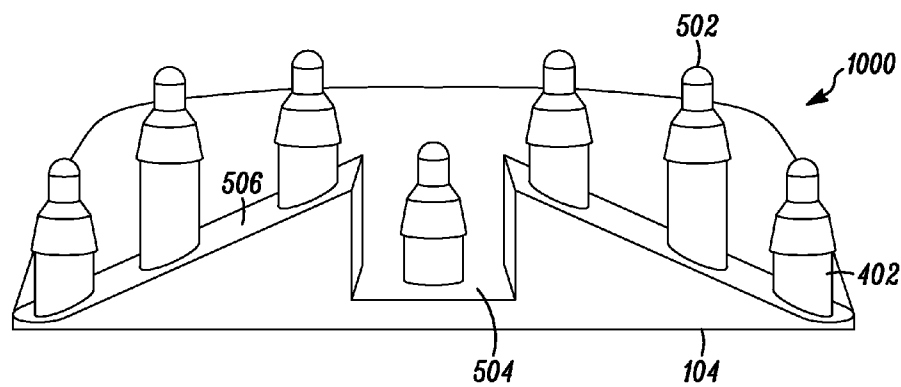


FIG. 10

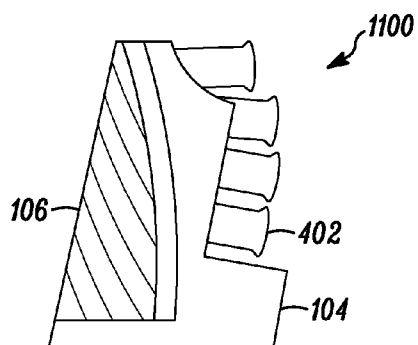


FIG. 11

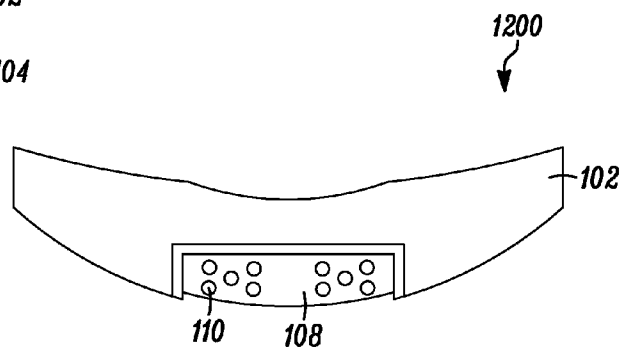


FIG. 12

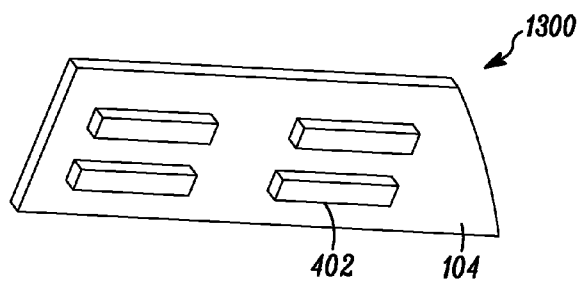


FIG. 13

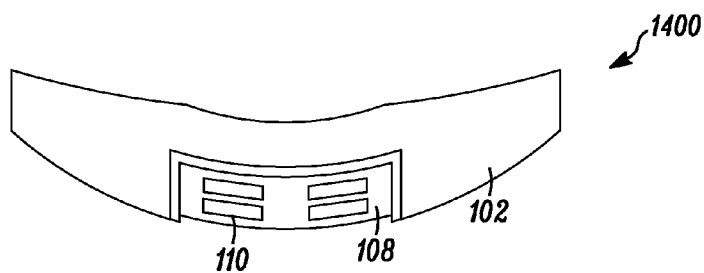


FIG. 14

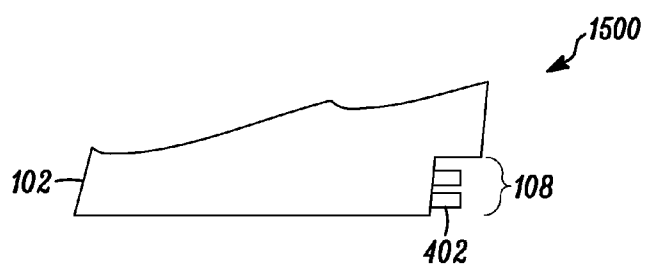


FIG. 15

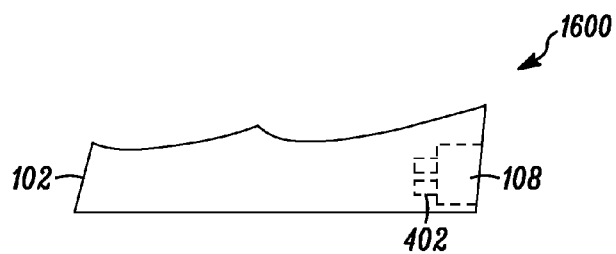


FIG. 16

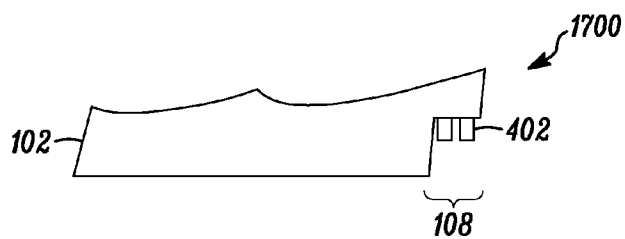


FIG. 17

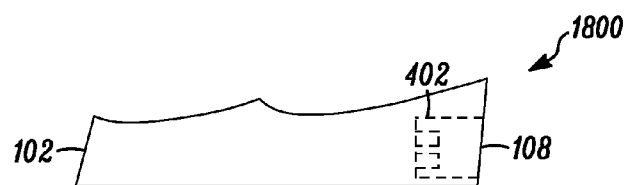


FIG. 18

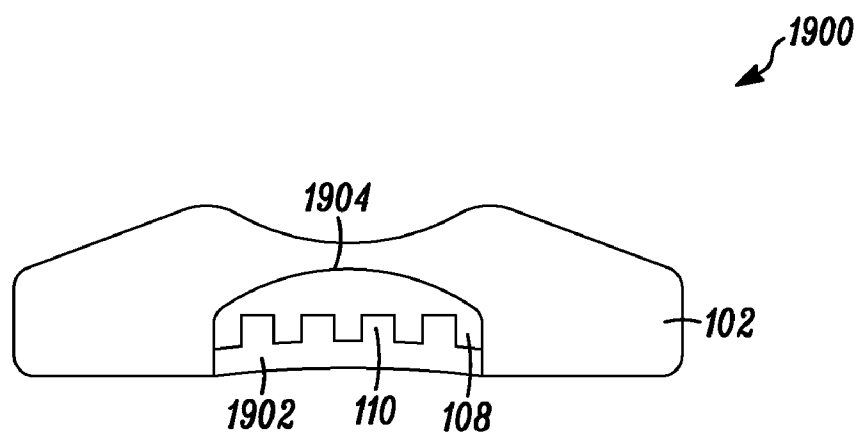


FIG. 19

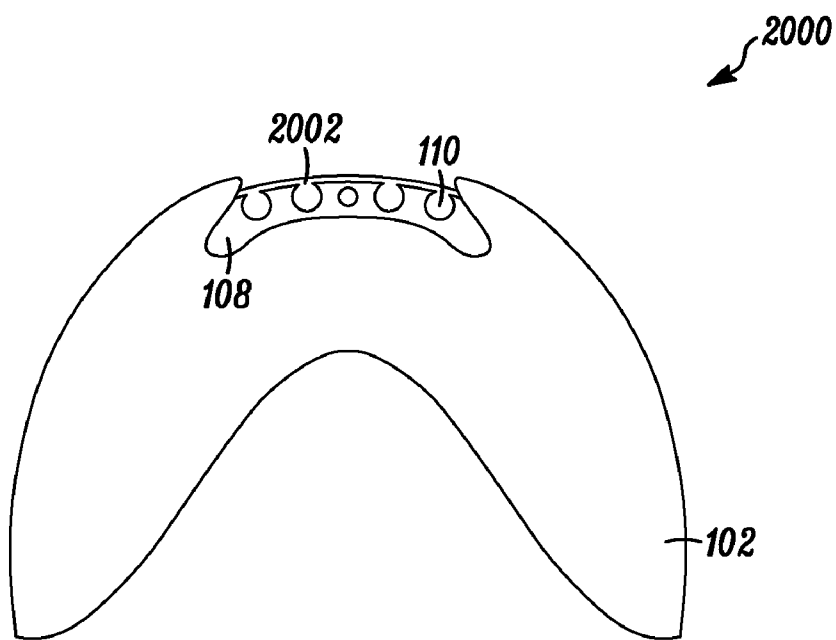


FIG. 20

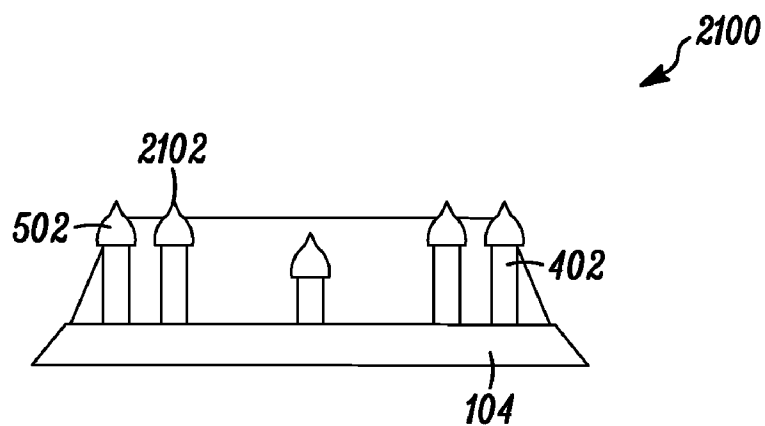


FIG. 21

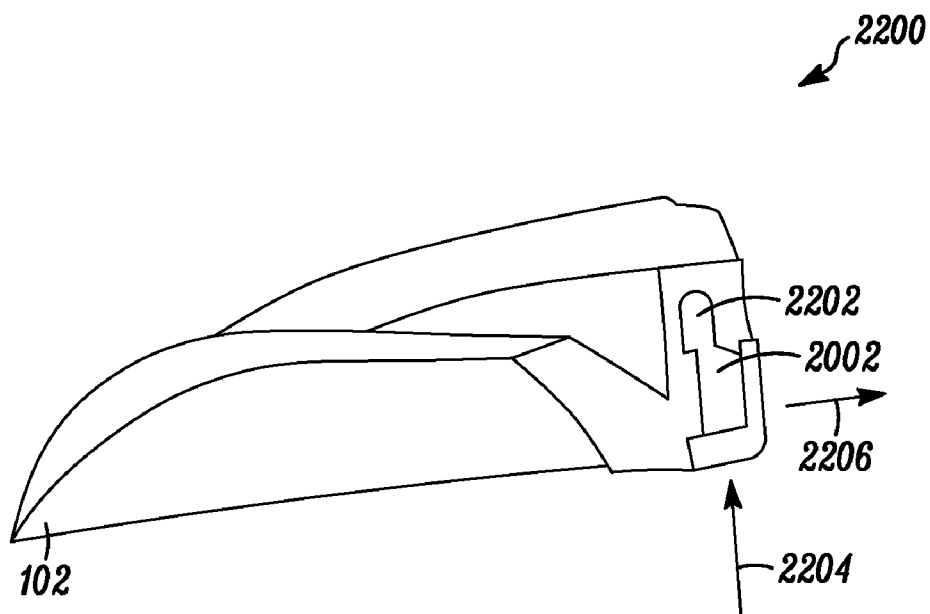


FIG. 22

INTERCHANGEABLE MOUTHGUARD COMPONENT SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefit of U.S. provisional patent application No. 61/350,231 titled 'Interchangeable Mouthguard Component System', filed 1 Jun. 2010, and also claims the benefit of U.S. provisional patent application No. 61/350,243 titled 'Mouthguard Fitment Tool System', filed 1 Jun. 2010, which are both incorporated by reference herein for any purpose.

BACKGROUND

[0002] Mouthguards are typically used to protect an athlete's teeth during a sporting activity. Often, their use is required by the team or sports organization as a safety precaution. Such sports may include football, hockey, boxing, rugby, baseball, basketball, cycling and wrestling, for example. An athlete may wear a mouthguard for many hours during a sporting event. Most mouthguards are non-customizable and made as one piece, to reduce costs and ease of manufacturing.

[0003] Mouthguards are generally made in one color and may optionally have the manufacturer's or licensee logo placed somewhere on the device, but no options for other visual customization. There are currently very limited or no options for an athlete or team to customize the look or function of a mouthguard.

[0004] Customization of mouthguards includes functional customization as well as visual or stylistic customization. Typically, if an athlete needed an additional function for their mouthguard, they were required to buy a new or separate mouthguard that included that new function, such as lip guard or strap, for example. Similarly, manufacturers have to maintain multiple one-piece molds for various types of mouthguards with different functional aspects. Most amateur athletes participate in more than one sport or at the least, more than one position within a sport. Each position or event possibly requiring or optimally utilizing different functional aspects of a mouthguard or mouthguards. Mouthguards found in the prior art do not allow for conversion between different functional aspects, such as between a strapped mouthguard and strapless mouthguard.

[0005] With regard to stylistic or visual customization, amateur athletes often play on many teams or are fans of multiple professional teams and currently lack the option to interchange colors or logos on their mouthguards between events. A deterrent for producing multi-piece mouthguards is the safety risk of a portion or component of the mouthguard system becoming detached during participation and creating a choking risk or other safety hazard.

[0006] There is a need for functional and stylistic customization of mouthguards. There is a need for a mouthguard system that allows for conversion between functional components. There is a need for providing multiple functional or stylistic options to a customer without requiring a manufacturer to create and maintain separate molds for each embodiment.

SUMMARY

[0007] Embodiments relate to an interchangeable mouthguard component system. The system includes a mouthguard

base with a receiving recess positioned within at least a front surface of the base, a securely attachable mouthguard component positioned to fit within the recess, one or more attaching posts positioned on one of the recess or component and one or more holes positioned opposite the posts on either the recess or component. The mouthguard component, when attached, is positioned sufficient to maintain a substantially flush front surface of the base.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The accompanying drawings illustrate non-limiting example embodiments of the invention.

[0009] FIG. 1 is a prospective view of an interchangeable mouthguard component system with the component detached, according to some embodiments.

[0010] FIG. 2 is a prospective view of an interchangeable mouthguard component system, according to some embodiments.

[0011] FIG. 3 is a side view of an interchangeable mouthguard component system, according to some embodiments.

[0012] FIG. 4 is a perspective view of a tether attachment, according to some embodiments.

[0013] FIG. 5 is a perspective view of the inner side of a component, according to some embodiments.

[0014] FIG. 6 is a perspective view of the outer side of a component, according to some embodiments.

[0015] FIG. 7 is a perspective view of the side of a component, according to some embodiments.

[0016] FIG. 8 is a perspective view of the bottom of a component, according to some embodiments.

[0017] FIG. 9 is a perspective view of the top of a component, according to some embodiments.

[0018] FIG. 10 is a perspective view of the inner side of a component including a component recess, according to some embodiments.

[0019] FIG. 11 is a perspective view of the side of a component including horizontal posts, according to some embodiments.

[0020] FIG. 12 is a perspective view of the front side of a mouthguard base including holes, according to some embodiments.

[0021] FIG. 13 is a perspective view of the inner side of a component, according to some embodiments.

[0022] FIG. 14 is a perspective view of the front side of a mouthguard base including posts, according to some embodiments.

[0023] FIG. 15 is a perspective view of the side of a mouthguard base including horizontal posts, according to some embodiments.

[0024] FIG. 16 is a perspective view of the side of a mouthguard base including horizontal holes, according to some embodiments.

[0025] FIG. 17 is a perspective view of the side of a mouthguard base including vertical posts, according to some embodiments.

[0026] FIG. 18 is a perspective view of the side of a mouthguard base including horizontal posts, according to some embodiments.

[0027] FIG. 19 is a perspective view of the front side of a mouthguard base, according to some embodiments.

[0028] FIG. 20 is a perspective view of the under side of a mouthguard base, according to some embodiments.

[0029] FIG. 21 is a perspective view of the inner side of a component, according to some embodiments.

[0030] FIG. 22 is a cross-sectional view of the side of a mouthguard base, according to some embodiments.

DETAILED DESCRIPTION

[0031] Throughout the following description, specific details are set forth in order to provide a more thorough understanding of the invention. However, the invention may be practiced without these particulars. In other instances, well known elements have not been shown or described in detail in order to avoid unnecessarily obscuring the invention. The drawings show, by way of illustration, specific embodiments in which the invention may be practiced. These embodiments may be combined, other elements may be utilized or structural or logical changes may be made without departing from the scope of the invention. Accordingly, the specification and drawings are to be regarded in an illustrative, rather than a restrictive, sense.

[0032] All publications, patents and patent documents referred to in this document are incorporated by reference herein in their entirety, as though individually incorporated by reference. In the event of inconsistent usages between this document and those documents so incorporated by reference, the usage in the incorporated references should be considered supplementary to that of this document; for irreconcilable inconsistencies, the usage in this document controls.

[0033] In this document, the terms “a” or “an” are used, as is common in patent documents, to include one or more than one, independent of any other instances or usages of “at least one” or “one or more”. In this document, the term “or” is used to refer to a nonexclusive or, such that “A, B or C” includes “A only”, “B only”, “C only”, “A and B”, “B and C”, “A and C”, and “A, B and C”, unless otherwise indicated. The terms “above” and “below” are used to describe two different directions in relation to the center of a composite and the terms “upper” and “lower” may be used to describe two different surfaces of a composite. However, these terms are used merely for ease of description and are not to be understood as fixing the orientation as embodiments of mouthguards in accordance with the present inventions may be configured to be worn on either the upper or lower teeth or on the upper and lower teeth simultaneously. In the appended aspects or claims, the terms “first”, “second” and “third”, etc. are used merely as labels, and are not intended to impose numerical requirements on their objects.

[0034] Embodiments of the present invention describe an interchangeable mouthguard component system. The system may include a mouthguard base and one or more interchangeable components that are removably securable to the mouthguard base. The mouthguard base defines a recess in its anterior portion. The interchangeable component is configured to be secured within the recess. The interchangeable components may include straps, lip guards and/or protective shields, for example.

[0035] The present system provides a secure fit that reduces safety concerns of dislodgement during activity. Typically, at least a portion of the interchangeable component is configured to be received within the recess to secure the interchangeable component to the mouthguard base. The recess may include one or more holes. The holes are configured to receive attaching posts which extend from a corresponding surface of the interchangeable components. The attaching posts are typically configured to securely engage the holes.

[0036] The interchangeable component may have a peripheral shape that corresponds with the peripheral shape of the

recess. In this configuration, aspects of the interchangeable component may be flush with and define a continuous surface or arc with the anterior surfaces of the mouthguard base when the interchangeable component is fit within the recess. This may define a substantially flush front surface and flush incisal surface of the mouthguard base. This may improve the comfort and aesthetic of the mouthguard by eliminating rough edges and sharp transitions that may come into contact with a user's anatomy. The peripheral edge of the removable component may include a lip or flange that may be configured to be received within a peripheral groove defined within the cavity of the mouthguard base to secure or further secure the removable component to the mouthguard base.

[0037] The interchangeable component can allow customization, both functionally and cosmetically or stylistically. The interchangeable component is securely attached while in use (i.e. during a sporting event), yet may be removed and replaced or interchanged for another component prior to a subsequent use. The interchangeable component may provide an enhanced customizable function, such as greater protection and/or alternative functionality, and in certain aspects the interchanged components may provide alternative hardness or durability or increased comfort. The interchangeable component may allow the replacement of higher wear components while reducing the waste generated from the use of the products designed in accordance with the present inventions. The component may allow customization by displaying colors, artwork, logo or designs on the front surface of the mouthguard system. These may be positioned on display surface of the component. An individual or team may utilize the customization for their individual or team needs or desires. Corporations or other entities may utilize the display surface of the interchangeable components as advertising space during a sporting event, for example.

[0038] The interchangeable mouthguard system may reduce the cost of manufacturing a line of mouthguards by reducing the number of molds a manufacturer would need to create and maintain to provide similar functions in traditional mouthguards.

[0039] Referring to FIG. 1, a perspective view **100** of an exemplary embodiment of an interchangeable mouthguard component system with the interchangeable component **104** detached from the mouthguard base **102**. As illustrated, the interchangeable component **104** is in the form of a shield. The mouthguard base **102** includes a recess **108**. The recess **108** is defined on a front surface of the mouthguard base **102** and extends around into the lower surface of the mouthguard base **102** for exemplary purposes. The recess **108** may include one or more holes **110**, shown in phantom, for receiving the one or more attaching posts extending from the interchangeable component **104**. The interchangeable component **104** may include a display surface **106**. In this view, the component **104** is detached **112** from the base **102**. When the component **104** is securely attached or fastened **202** within the recess **108**, a flush or substantially flush front surface (or optionally, incisal surface as well) of the base **102** can be formed and maintained (see view **200** of FIG. 2). A side view of the component **104** attached to the base **102** is illustrated by view **300** in FIG. 3.

[0040] The mouthguard base **102** may define a channel or a portion of a channel in which a set or subset of a user's teeth may be received when worn by a user. The teeth may be positioned between an outer wall and an inner wall defining the channel. The mouthguard base **102** includes a front surface. The front surface typically faces outward from a user's

mouth and may be at a location that is positioned over the incisors when worn by a user. An incisal surface may be formed in the direction perpendicular or toward perpendicular to the plane generally defined by the front surface and in the direction of a user's lower jaw. The mouthguard base **102** may be formed from various plastics, polymers or composites suitable for use in a user's mouth. In certain aspects, a mouthguard formed from the mouthguard base **102** may be formed by the user after increasing the temperature of the base (i.e., boiling in water), of a heat softenable materials positioned within the channel or heat softenable materials forming a portion of the channel of the mouthguard base **102**. The softened material may be formed over the user's teeth and, upon cooling, form a custom channel fit to the user's teeth.

[0041] The recess **108** may be formed in the front surface of the base **102** or a combination of the front surface and one or more of the incisal surface or side surfaces of the base **102**. The recess **108** may be sized to receive at least a portion of an interchangeable component **104** and securely attach therewith. The recess **108** may be optional, in that the component **104** may attach directly to one or more surfaces of the base **102**. The recess may include an upper ridge **1904**, lower lip **1902** or both to support contact and integration of a component **104** (see view **1900** of FIG. **19**).

[0042] The interchangeable component **104** may provide additional functionality, stylistic customization or both, to the mouthguard base **102**. Increased functionality may include increased hardness, durability, protection and safety. This may be accomplished by forming the component **104** of one or more materials different than the base material. The component **104** may have a higher durometer value than the base **102**, for example. Further functionality may include the addition of one or more of cameras, sensors or GPS devices, for example. The component **104** may include a camera for on-field video or picture capture, sensors for detecting body temperature or impact speeds or GPS for tracking total distance covered or movement speed analysis. The component **104** may include or be attached to further accessories, such as straps or tethers **404** (see view **400** of FIG. **4**), protective shields or lip guards, for example.

[0043] The interchangeable component **104** may increase the customization of the mouthguard base **102** by providing a visual distinction over a generic mouthguard system. The interchangeable components **104** may be different colors from each other or the mouthguard base **102**. The component **104** may include a display surface **106** in which a team or corporate logo is displayed. The artwork **106** may include pictures, numbers, designs or patterns, for example. The artwork **106** may be visible, not only on the front surface of the base **102** (and outer surface of the component **104**), but may extend to one or more additional surfaces of the mouthguard base **102**.

[0044] Referring to FIG. **4**, a perspective view **400** of a mouthguard base **104** and an interchangeable component in the form of tether attachment is shown, according to some embodiments. As discussed above, the component **104** may form or be attached to functional accessories, such as the illustrated tether **404**. One or more attaching posts **402** may be positioned on the component and be sized to securely attach with the oppositely positioned one or more holes **110** on the mouthguard base **102**. Conversely, the attaching posts **402** may be positioned on the base **102** and the holes **110** positioned on the component **104**.

[0045] The attaching posts **402** may be formed from a material that is harder than the material of the mouthguard base to permit the attaching posts **402** to be more readily pushed through the holes without substantial deformation which might cause them to bind. The attaching posts **402** may arms, columns, male fittings, extensions, etc. that may be secured to or integral with the interchangeable component **104**. The attaching posts **402** may have a constant, increasing or decreasing width or diameter as they extend from the interchangeable component **104**. Alternatively, the attaching posts **402** may have a size and or shape that varies along their length. The attaching posts **402** are typically sized to fit or engage with the one or more holes **110**. The one or more holes **110** may be holes, depressions, grooves, female fittings, recesses, etc. defined within the mouthguard base or defined within components secured to the mouthguard base. The attaching posts **402** may be shaped to correspond to the shape of the holes **110** or may be otherwise shaped to permit the attaching posts **402** to be engaged within the holes **110**. For example, the attaching posts **402** or holes **110** may be cylindrically shaped, oval shaped, triangularly shaped, square shaped, pentagonally shaped, hexagonally shaped, irregularly shaped or a combination thereof. The posts **402** may be of differing heights, diameters or a combination thereof. The one or more attaching posts **402** may further include one or more ridges positioned along their length. In certain aspects, the ridges may be positioned at a distal portion of the posts **402**. The ridges may extend circumferentially around the attaching posts **402** or may extend around only a portion of the portion of the attaching posts **402**. The ridges may act as a lip or edge to engage aspects of the holes **110**. The ridges and holes **110** may be configured to create a positive tactile sensation or audible noise when the attaching posts **402** are fully engaged within the holes **110**. In certain aspects, the ridges may extend around between about 40% to about 60% the circumference of the one or more attaching posts **402**. In other aspects, the ridges may surround about 20% to about 80% or about 30% to about 70% the circumference of the attaching posts, for example. A ridge extending around only a portion of the attaching posts **402** may also or alternatively prevent a buildup of pressure within the cavity during insertion and may inhibit the formation of a vacuum between an attaching post **402** and hole **110**.

[0046] The holes **110** are generally configured to receive and secure one or more of the attaching posts **402**. The holes **110** may be formed in the mouthguard base **102** in a location that is anterior or forward of the channel for receiving the teeth. The holes **110** may include a larger distal cavity **2202** to receive and secure an attaching post **402** that includes an enlarged distal end or ridge (see view **2200** of FIG. **22**) or may be otherwise shaped to conform or not to conform with the attaching posts **402**. As a component is inserted (in direction of arrow **2204**, generally vertical in this embodiment), a vacuum or back pressure may resist the insertion. A relief channel **2002** (see view **2000** of FIG. **20**) may be provided to allow for the escape of air or pressure (shown by arrow **2206**) and/or to function as a strain relief feature to allow for the hole **110** to deform when receiving the attaching post **402** or to deform when the attaching post **402** is being removed. The relief channel **2002** may extend from an outer surface of the mouthguard base to an inner surface of the mouthguard base that defines the holes **110**. The relief channel may alternatively be formed internally within the inner surface defining

the hole 110. One or more of the holes 110 may include a relief channel 2002, such as a slit, lateral channel or vertical channel, for example.

[0047] The attaching posts 402 may be positioned substantially vertically or vertically on the component to allow one or more of the attaching posts 402 to be positioned anterior to the teeth in the mouthguard base 102. In certain aspects, the attaching posts 402 are positioned such that one or more attaching posts 402 and one or more holes 110 are substantially parallel or parallel to the front surface of the mouthguard base when the interchangeable component 104 is secured to the mouthguard base 102. The holes 110 and attaching posts 402 are generally positioned in front of the teeth channel and may not pass completely through the mouthguard base 102. Alternatively or in addition, the posts 402 may be substantially horizontally positioned on the component 104, such that the one or more attaching posts 402 and one or more holes 110 are perpendicular to the front surface of the mouthguard base. In this embodiment, the holes 110 and attaching posts 402 may be positioned in front of or under the teeth channel and do not pass completely through the mouthguard base 102. The attaching posts 402 and optionally holes 110 may be positioned at an angle more or less than parallel or perpendicular to the front surface or incisal surface of the mouthguard base 102. The attaching posts 402 may include varying circumferences along the length of each post, such as a cone shape or a bulb shape, for example.

[0048] The attaching posts 402 are of sufficient hardness or stiffness to remain substantially rigid during insertion to allow for a proper fit with holes 110. Similarly, the mouthguard base 102 is of sufficient hardness, or at least the portion supporting the holes, to substantially receive the posts 402.

[0049] Referring to FIG. 5, a perspective view 500 of the inner side of a component is shown, according to some embodiments. The attaching posts 402 may be generally vertical in position and be positioned on a fitting feature 506 of the component 104. Fitting features 506 may provide further surface area or function in securely attaching the component 104 to mouthguard base 102. An example of a fitting feature 506 may be a component recess 504. Attaching posts 402 may include ridges or edges 502 or points 2102 and the like to increase attachment and compression forces (see view 2100 of FIG. 21).

[0050] Referring to FIG. 6, a perspective view 600 of the outer surface of a component is shown, according to some embodiments. Attaching posts 402 may extend above the upper surface of the component 104 (as shown) or be flush or shorter than the upper surface of the component 104. A display surface 106 may be visible on at least an outer or front surface of the component 104.

[0051] Referring to FIG. 7, a perspective view 700 of the side of a component is shown, according to some embodiments. Attaching posts 402 may include a partial ridge, edge or flange 502 and additionally be in contact with a fitting feature 506. The attaching posts 402 may be angled toward the back of a user's mouth, such as between an angle of about 85 degrees and about 70 degrees, about 75 degrees and 55 degrees, about 65 degrees and 45 degrees or less than about 45 degrees, for example. A bottom view 800 of the component 104 is illustrated in FIG. 8.

[0052] Referring to FIGS. 9-10, perspective views 900, 1000 of the top (FIG. 9) and inner side (FIG. 10) of a component are shown, according to some embodiments. Attach-

ing posts 402 may be positioned on or near fitting features 506 and be of differing heights or positioned within a component recess 504, for example.

[0053] Referring to FIG. 11, a perspective view 1100 of the side of a component including horizontal attaching posts 402 is shown, according to some embodiments. Horizontal or substantially horizontally positioned attaching posts 402 may be included on a component 104. A display surface 106 may be visible on the side surfaces of the component, in addition to the front surface for example.

[0054] Referring to FIG. 12, a perspective view 1200 of the front side of a mouthguard base 102 including holes 110 is shown, according to some embodiments. The recess 108 of a mouthguard base 102 may include holes 110 either on a front surface of the recess 108 or on an upper surface, for example. Holes 110 and attaching posts 402 are generally aligned oppositely between the component 104 and mouthguard base 102 and may be attached by compression, friction, mechanical fastening (such as utilizing an edge or lip to secure the post with a hole), material interactions (weak chemical attractions, for example) or some combination thereof.

[0055] Referring to FIG. 13, a perspective view 1300 of the inner side of a component is shown, according to some embodiments. Attaching posts 402 may be rectangular in shape and be oppositely positioned with holes 110 that are sized or configured to substantially match the shape of the attaching post 402 (see view 1400 of FIG. 14).

[0056] Additionally, the recess 108 of base 102 may be completely enclosed and defined with a front surface of a mouthguard base 102 (see views 1600 and 1900 of FIGS. 16 and 18, respectively). Alternatively, the recess 108 may be defined, not only in the frontal surface of the base 102, but into one or more of the side surfaces or incisal surface of the base 102 (see views 1500 and 1700 of FIGS. 15 and 17, respectively). Attaching posts 402 may be horizontally positioned, vertically positioned or positioned at some angle between the two positions on either the component 104 or base 102. The Abstract is provided to comply with 37 C.F.R. §1.72(b), to allow the reader to quickly ascertain the nature of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims.

What is claimed, is:

1. An interchangeable mouthguard component system, comprising:

- a mouthguard base, defining a recess within at least a front surface of the mouthguard base;
- an interchangeable component, positioned within the recess;
- one or more attaching posts, positioned on one of the recess of the mouthguard base or interchangeable component; and
- one or more holes, positioned opposite the posts on either the recess of the mouthguard base or the interchangeable component, wherein the one or more holes are configured to receive the one or more attaching posts.

2. An interchangeable mouthguard component system, further comprising the interchangeable component, further defining a front surface that is substantially flush with a front surface of a portion of the mouthguard base when the interchangeable component is secured within the recess of the mouthguard base.

3. The system of claim 1, wherein the one or more holes or attaching posts are cylindrically shaped, triangularly shaped,

square shaped, pentagonally shaped, oval shaped, hexagonally shaped, irregularly shaped or a combination thereof.

4. The system of claim 1, wherein the one or more attaching posts are of differing heights, diameters or a combination thereof.

5. The system of claim 1, wherein the one or more attaching posts further comprise one or more ridges positioned at a distal portion of the attaching posts.

6. The system of 1, wherein the attaching posts include varying circumferences along the length of each attaching post.

7. The system of claim 1, wherein the component comprises one or more materials different than the mouthguard base.

8. The system of claim 1, wherein the component further comprises a display surface at least partially visible on an outer surface of the component.

9. The system of claim 1, wherein the one or more attaching posts and one or more holes are parallel to the front surface of the mouthguard base.

10. The system of claim 1, wherein the one or more attaching posts and one or more holes are perpendicular to the front surface of the mouthguard base.

11. A component for a mouthguard, comprising:
a body, including at least an outer surface and positioned to fit within a recess of a mouthguard base;
one or more attaching posts or holes in contact with the body, sized to securely attach with one or more oppositely positioned one or more attaching posts or holes of the mouthguard base; and
a display surface, at least partially visible on the outer surface of the body.

12. The component of claim 11, wherein the one or more holes or attaching posts are cylindrically shaped, triangularly shaped, square shaped, pentagonally shaped, oval shaped, hexagonally shaped, irregularly shaped or a combination thereof.

13. The component of claim 11, wherein the one or more attaching posts further comprise one or more ridges.

14. The component of claim 11, wherein the one or more attaching posts include varying circumferences along the length of each post.

15. The system of claim 11, wherein the one or more attaching posts and one or more holes are parallel to the front surface of the mouthguard base.

16. The system of claim 11, wherein the one or more attaching posts and one or more holes are perpendicular to the front surface of the mouthguard base.

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