



US 20080068556A1

(19) **United States**

(12) **Patent Application Publication**
Harrison

(10) **Pub. No.: US 2008/0068556 A1**

(43) **Pub. Date: Mar. 20, 2008**

(54) **HEAD GEAR ASSEMBLY FOR WATER GAME PLAY**

Publication Classification

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(51) **Int. Cl.**
A63B 33/00 (2006.01)
(52) **U.S. Cl.** **351/49; 351/158; 351/43; 351/62**

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(57) **ABSTRACT**

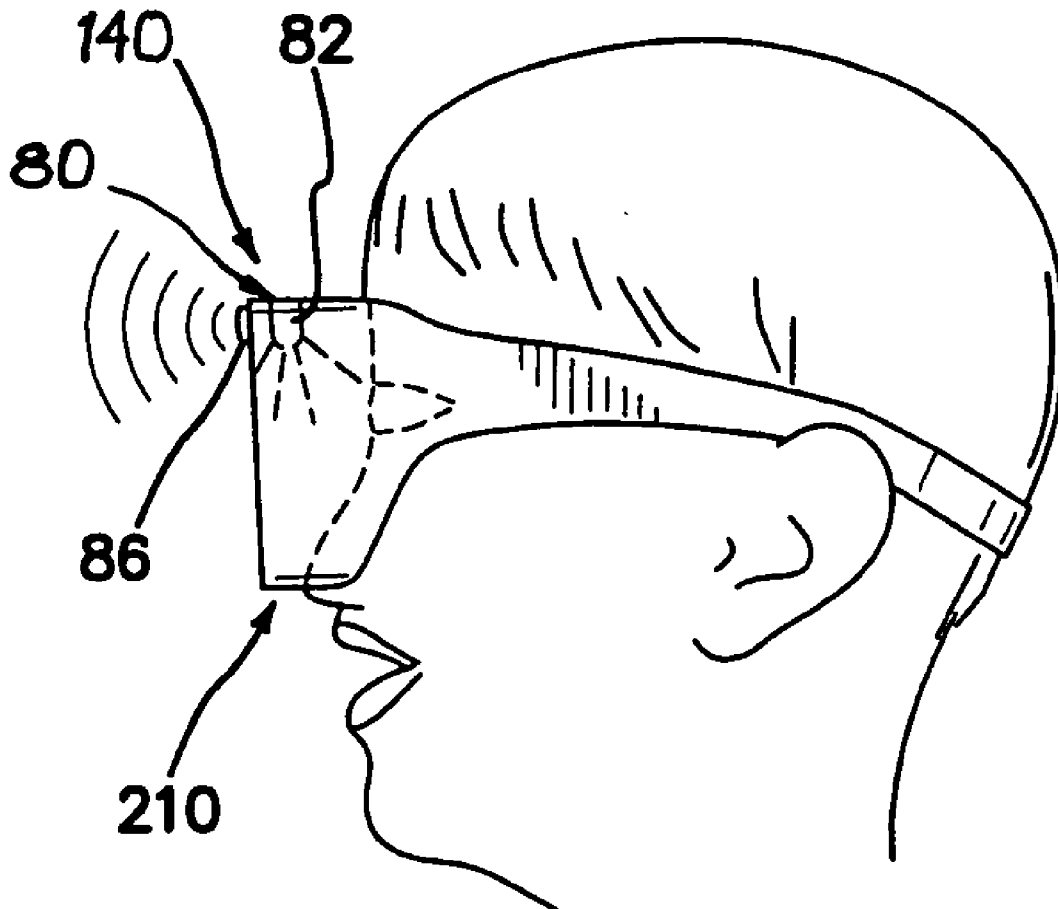
(21) Appl. No.: **11/901,271**

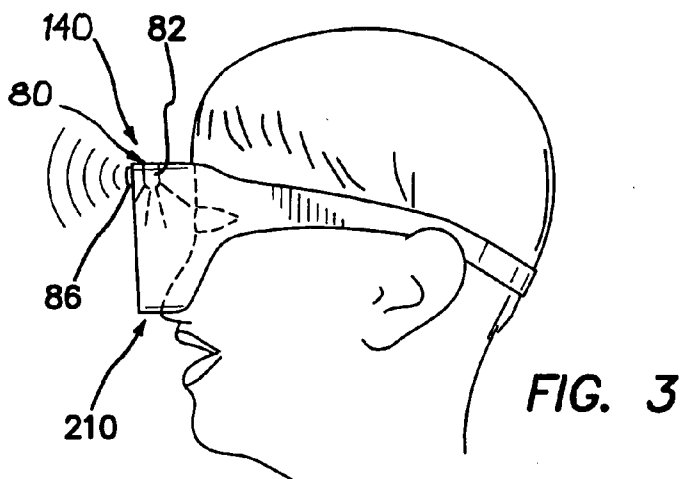
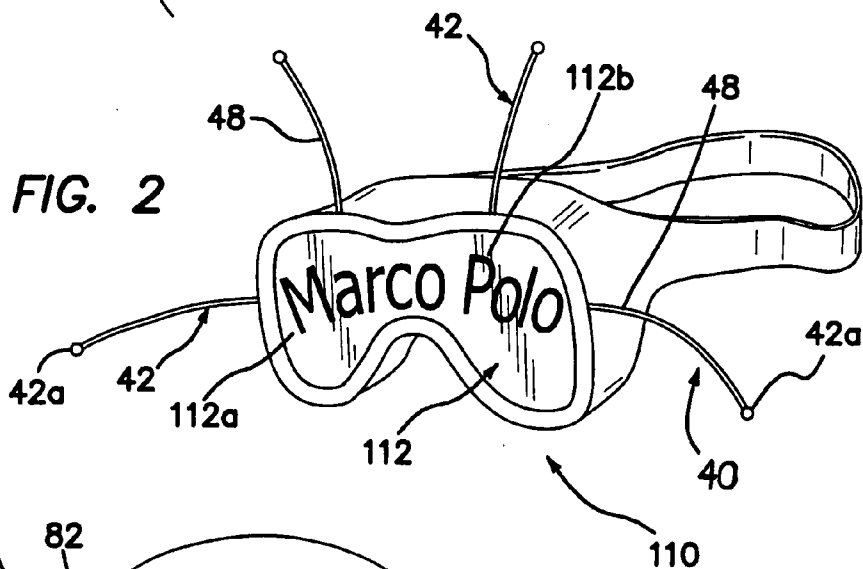
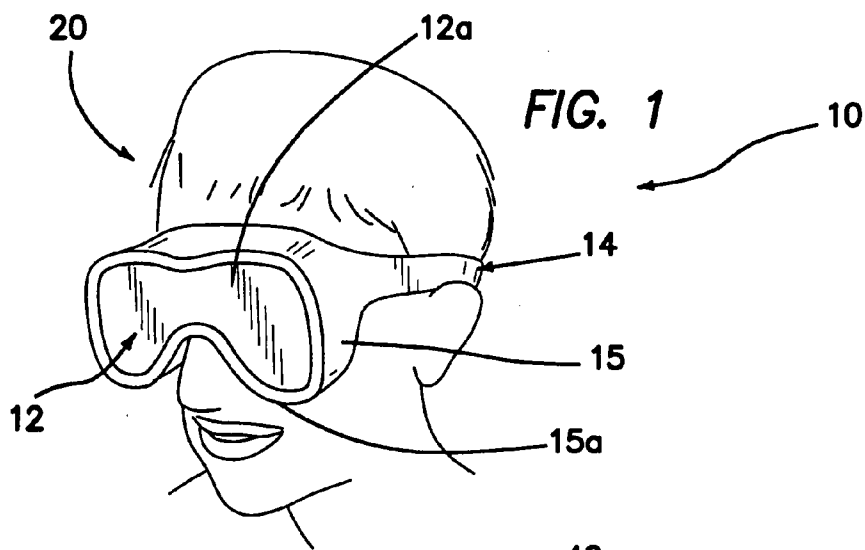
Head gear assembly for water game play includes a lens element and an attachment element coupled to the lens element and configured to effect a substantially water-tight seal with the face of a wearer. The lens element has an image obscuring property, for example a view portion effective to cause at least significant distortion of images viewed through the lens element when the assembly is secured over the eyes of the wearer. The assembly is particularly useful in the children's game known as "Marco Polo".

(22) Filed: **Sep. 14, 2007**

Related U.S. Application Data

(60) Provisional application No. 60/844,755, filed on Sep. 15, 2006.





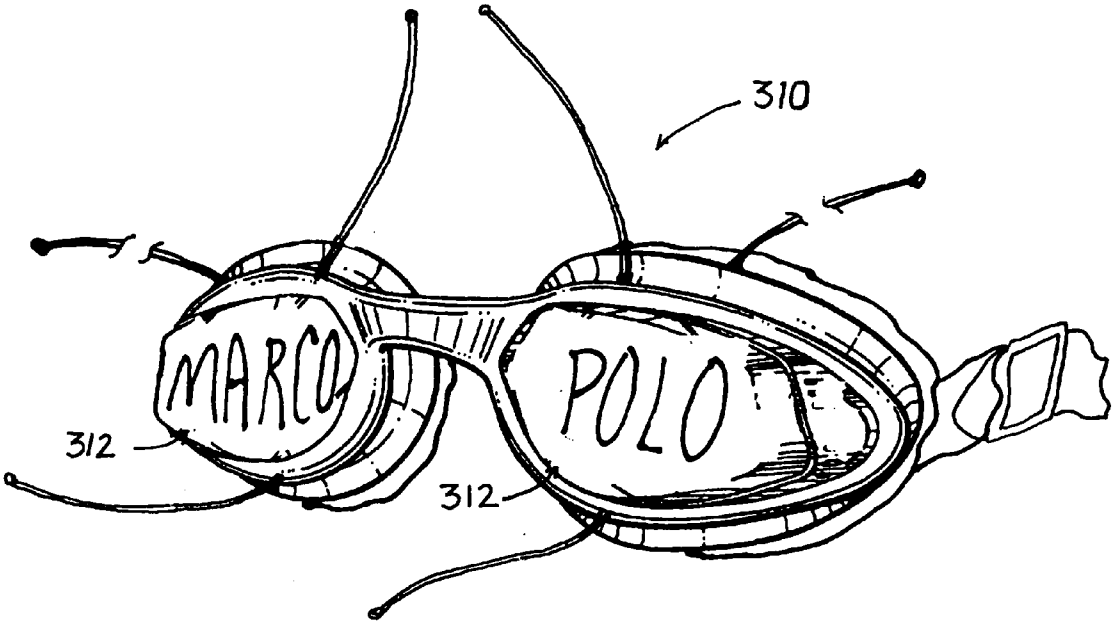


FIG. 4

HEAD GEAR ASSEMBLY FOR WATER GAME PLAY

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 60/844,755, filed on Sep. 15, 2006, the entire disclosure of which is incorporated herein by this specific reference.

[0002] The present invention generally relates to water games for swimming pools and the like and more specifically relates to a head gear assembly for water game play.

[0003] A popular children's game commonly called "Marco Polo" is a form of tag played in a swimming pool. The game is popular in the United States, Australia, Canada and Brazil.

[0004] The game is played by two or more persons. At any time during the game there is one designated player, referred to as "It", who must swim around the pool with his or her eyes tightly closed. The designated player attempts to tag the other player or players, and being that his or her eyes are closed, the designated player can only sense where the other players are by sound. The designated player may call out the word "Marco!", at which point all the other players are required to yell "Polo!" at which point the designated player can hear the location of the other players and can reach out for and attempt to "tag" any one of the other players. When the "It" player succeeds in tagging another player, the latter becomes "It". Another variant of the game is "Sharks and Minnows" or which generally uses the tag rules of Marco Polo, but the players are not required to call out or make a sound at any time.

[0005] A problem encountered for players of the game Marco Polo and other "blind" player type games is that in order for players to adhere to the rules of the game, and the game to be played successfully, the designated player must not be allowed to physically see or view the other players during the time he or she is designated as "It". The designated player must be trusted by the other players that he or she will maintain his or her eyes closed during the appropriate time. This is, in practice, difficult to accomplish, both for the player who is "It" who often has a natural tendency or instinct to want to open the eyes when moving quickly about the pool, and the other players, who must trust that the designated player is really maintaining his or her eyes closed. As the game is played in the water, a blindfold, such as a bandanna, worn around the eyes is not usually practical as the blindfold can easily become dislodged by the movement of the player through the water.

[0006] The present invention provides a novel head gear assembly for improving "blind" tag games such as Marco Polo and the like.

SUMMARY OF THE INVENTION

[0007] Accordingly, headwear assemblies for use in aquatic games and other water play are provided. The assemblies generally comprise a lens element and an attachment element coupled to the lens element and configured to effect a substantially water-tight seal with the face of a wearer. The lens element has an image obscuring property. For example, the lens element includes a view portion structured and/or effective to cause at least significant distortion of images viewed through the lens element when the assembly is secured over the eyes of the wearer. The

attachment element includes a frame portion extending away from a wearer's face and securing the lens portion. The frame portion preferably holds the lens element at an effective distance away from the wearer's face so as to prevent the lens element from pressing against or impacting the face.

[0008] More particularly, the view portion may be structured and/or effective to block passage of at least some wavebands or wavelengths of visible light through the lens element. In some embodiments, the view portion is structured and/or effective to block passage of some wavebands of visible light through the lens element while allowing other wavebands of visible light through the lens element. For example, the view portion may be structured and/or effective to allow certain colors of light to pass to the eyes of the wearer while blocking other colors of light so as to cause blocking or distortion of images viewed through the lens element.

[0009] It is contemplated that the lens element may be substantially entirely opaque and effective to prevent visible light from reaching the eyes of a wearer of the assembly.

[0010] In other embodiments, the lens portion includes one or more significant curves effective to cause distortion of images. In other embodiments, the lens portion may be grooved or include other texturing effective to obscure viewing of images. In yet other embodiments the view portion includes at least one of a reflective coating or a light refractive coating. One or more other suitable obscuring and/or distorting structures are contemplated and may be used for effecting obscuring or distortion of images, particularly, images of other persons, by the assemblies of the invention and such structures are considered to be included within the scope of the present invention.

[0011] In another aspect of the invention, the assemblies may further comprise a signal mechanism secured to one of the lens element and the attachment element. The signal mechanism is structured to be effective to alert a wearer of the assembly as to the presence of a nearby object or obstruction. For example, the signal mechanism comprises at least one projection, for example a flexible element, for example at least one wire element, for example, resilient wire element, that has sound transmitting properties, such that when a distal end of the projection comes into contact with a wall of a swimming pool for example, the wearer will be able to detect the presence of the wall.

[0012] In some embodiments of the invention, the signal mechanism comprises a plurality of projections.

[0013] Each and every feature and combination of two or more features described herein is included within the scope of the present invention provided that the features included in the combination are not mutually inconsistent.

[0014] These and other aspects and advantages of the present invention may be more clearly understood and appreciated with reference to the following detailed description, when considered in conjunction with the accompanying drawings in which like parts bear like reference numerals.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. 1 is a perspective view of a headwear assembly being worn over the eyes of a user, in accordance with the present invention.

[0016] FIG. 2 is a perspective view of another headwear assembly in accordance with the invention.

[0017] FIG. 3 is a side view of a further headwear assembly in accordance with the invention.

[0018] FIG. 4 is a perspective view of yet another headwear assembly in accordance with the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0019] Turning now to FIG. 1, a headgear assembly 10 in accordance with the invention generally comprises a lens element 12 and an attachment element 14 effective to secure the lens element 12 over the eyes of a human being 20. The assembly 10 is constructed to be useful when worn in the water, for example, in a swimming pool.

[0020] Advantageously, in order to improve playing of blind-tag games such as "Marco Polo" and the like, the lens element 12 includes a view portion 12a effective to distort images viewed through the lens element 12 when the lens element 12 and attachment element 14 are secured over the eyes of the wearer 20.

[0021] The attachment element 14 includes a frame portion 15 that may include a flange, for example, a resilient flange 15a, structured and dimensioned to effect a water-tight seal with the face of a wearer in order to keep water away from his or her eyes. The resilient flange 15a may be made, for example, of a rubber or rubber-like material or a suitable, flexible plastic. The frame portion 15 surrounds the lens element 12 of the assembly 10 and is connected thereto with a water-tight seal.

[0022] The attachment element 14 may be size adjustable, for example, by means of buckles, straps, stretchability, or other mechanism or property known to those of skill in the art.

[0023] Although the lens element 12 and the attachment element 14 are shown and hereinafter generally described as comprising two distinct materials or separate structures of the assembly 10, it is to be appreciated that in other embodiments of the invention, assemblies are provided which may comprise a lens element and the attachment element which together make up a single unitary structure. For example, the assembly may comprise a structure, for example a flexible structure, formed of single molded piece of material, which includes both a lens portion and an attachment portion, the assembly being configured to be fitted over the eyes of a wearer.

[0024] Advantageously, the assembly 10 is structured and designed to obscure the vision of the wearer 20, so as to facilitate the blind tag games, for example, by making it difficult for a wearer of the assembly to view his or her surroundings with clarity sufficient to identify or locate other players of the game. In some embodiments, the view portion 12a is structured to cause substantial distortion of images viewed through the lens element.

[0025] The distortion is preferably sufficient to make it more difficult for the wearer of the assembly to locate and/or recognize other players of the game, relative to a wearer of conventional swimming goggles.

[0026] The lens element 12 may be structured of or contain a material effective to block passage of light and/or

cause distortion of light passing to the eye of a wearer of the assembly. Thus, the wearer of the assembly will not be able to see clearly, for example, will see only a darkened and/or distorted image of his or her surroundings, for example, when playing a tag game in a swimming pool.

[0027] In some embodiments, the view portion 12a of the lens element 12 comprises a substantially opaque material or, alternatively, a translucent, color-tinted material or a coating of such material. In some embodiments, view portion 12a is structured to allow certain wavebands of light to pass while blocking other wavebands. For example, the lens element 12 may be structured to allow only blue wavebands of light to pass to the eyes of the wearer, or the lens element 12 may be structured to block selected colors by filtering out corresponding wavebands in the visible spectrum. In some embodiments, the lens material blocks certain wavebands of visible light as well as certain wavebands of harmful ultraviolet light.

[0028] In yet other embodiments, the lens element 12 comprises a transparent or translucent material having a reflective coating which covers at least a portion of the lens element 12. Such a reflective coating is effective to cause the wearer of the assembly 10 to see his own reflection when looking through the lens element rather than seeing his or her surroundings with any significant clarity. In some embodiments of the invention, the lens element includes a refracting portion, for example, a transparent element which is effective to cause refraction or bending of light passing to the eyes of the wearer of the assembly.

[0029] In some embodiments, the lens element 12 is substantially planar in form. In other embodiments, the lens element 12 is substantially non-planar in form. For example, the lens element 12 may include one or more curved surfaces along a portion, for example, a major portion, of the lens element. Different types or degrees of curvature of the lens element 12 will provide a desired distortion effect to the wearer of the lens element.

[0030] In one aspect of the invention, the lens element 12 is structured to distort light passing to the eyes without entirely blocking light. The example, the lens element 12 may comprise a transparent or translucent lens material having a contoured or wavy surface. Thus, while peering through the lens element 10, the field of view of the wearer 20 appears distorted to some degree. The level of distortion may be somewhat amplified when the user views objects or other people under when the assembly is worn beneath the surface of water.

[0031] Alternatively, the lens element 12, may include spaced apart grooves or other texturing to achieve a variety of different distortion effects.

[0032] It is to be appreciated that the lens element 12 may be removable from the frame portion 15, for example, by bending the frame portion thereby releasing the lens element 12 therefrom. The assembly 10 may be structured of materials that will allow for the lens element 12 to be relatively easily removed and replaced with respect to the frame portion 15. For example, the frame portion 15 may comprise a resilient rubber-like material that provides a water tight seal with the lens element. The lens element 12 may be replaceable with another substantially identical lens element (not shown) of a different color or having a different

distortion effect. Thus, a set of lens elements **12** may be provided comprising one lens element having a first distortion or translucent effect and another lens element that is interchangeable with the first lens element that provides a second distortion or translucent effect. In other embodiments, a first lens element is provided having a first translucent coloring and a second lens element is provided having a second translucent coloring that is different from the first translucent coloring.

[0033] Turning now to FIG. 2, another assembly **110** in accordance with the invention is shown. Except as expressly described herein, assembly **110** is similar to assembly **10** and features of assembly **110** which correspond to features of assembly **10** are designated by the corresponding reference numerals increased by **100**.

[0034] Assembly **110** is substantially the same as assembly **10**, with the primary difference being the addition of a signal mechanism **40** which is coupled or connected to either the attachment element **114** or the lens element **112**. The signal mechanism **40** is effective to signal to the wearer (not shown in FIG. 2) of the assembly **110** when the wearer of the assembly **110** may be approaching an obstacle, for example, a solid object, such as a pool wall or another player.

[0035] More particularly, the signal mechanism **40** may comprise at least one projection **42**, for example, in the form of an antenna-like element, extending outward from the assembly **110**. The projection **42** is structured to provide an alert or a signal, for example, a sound, to the wearer upon a distal end **42a** of the projection **42** coming into contact with a solid obstacle.

[0036] For example, as shown in FIG. 2, the signal mechanism **40** comprises a plurality of flexible, resilient wire elements **48** having tips **42a**, which, upon coming into contact with an obstacle such as a wall of a pool, are caused to vibrate with sufficient energy to be heard or otherwise sensed by the wearer of the assembly. For example, the elements **48** may be made of a material having sound transmitting properties, such as a metal or other suitable material. Thus, the projections **42** are structured such that when the distal end **42a** of one of the projections **42** comes into contact with a wall of a swimming pool, for example, the wearer will be able to detect the presence of the wall by the sound that is transmitted from the wire through the water to the wearer's ears.

[0037] It is also contemplated that the signal mechanism may alternatively or additionally comprise an electronic signal mechanism. For example, the signal mechanism may comprise a transmitter/receiver assembly, structured to be effective to alert the wearer of the location of an obstacle using electronic signals.

[0038] Still referring to FIG. 2, another feature shown is a surface **112a** of the lens element **112** which comprises an image **112b**, for example, a hologram image, for example, a hologram image of the words "Marco Polo" which appears to dynamically change, for example, appear and disappear, depending on the angle from which the surface **112a** is viewed.

[0039] Referring now to FIG. 3, another assembly **210** in accordance with the invention is shown. Except as expressly described herein, assembly **210** is similar to assembly **110** and features of assembly **210** which correspond to features

of assembly **110** are designated by the corresponding reference numerals increased by **100**.

[0040] Assembly **210** is substantially the same as assembly **110**, with the primary difference being that the signal mechanism **140** comprises a sonar device **80**, for example, a conventional pulse-echo device including a visual display **82**, e.g. a light emitting diode (LED), and a sonar transmitter/receiver **86** connected to the display **82**. For example, when the transmitter/receiver **86** detects an obstacle, for example, a human being, within a certain range, for example, three or four feet, of the transmitter/receiver **86**, the display **82** visually (or audibly) alerts the wearer **20**, for example, by illuminating, blinking or pulsing. It is contemplated that the signal mechanism **140** may be configured or otherwise made effective such that the blinking and/or pulsing may increase in frequency as the obstacle becomes closer to the transmitter/receiver **86**, thereby providing the wearer with an indication of his or her relative proximity of the obstacle, e.g. a wall or a human being.

[0041] Referring now to FIG. 4, yet another headwear assembly **310** in accordance with the invention is shown. In this embodiment, the headwear assembly **310** is substantially the same as assembly **110**, except that assembly **310** is generally in the form of swim goggles, in that assembly **310** comprises two separate, spaced apart lens elements **312**, rather than a single lens element **112**.

[0042] While this invention has been described with respect to various specific examples and embodiments, it is to be understood that the invention is not limited thereto and that it can be variously practiced.

What is claimed is:

1. A headwear assembly for use in water play, the assembly comprising:

a lens element; and

an attachment element coupled to the lens element and configured to effect a substantially water-tight seal with the face of a wearer;

the lens element including a view portion structured and/or effective to cause at least significant distortion of images viewed through the lens element when the lens element and attachment element are secured over the eyes of the wearer.

2. The assembly of claim 1 wherein the view portion is effective to block passage of visible light through the lens element.

3. The assembly of claim 1 wherein the view portion is effective to block passage of some wavebands of visible light through the lens element while allowing other wavebands of visible light through the lens element.

4. The assembly of claim 1 wherein the view portion comprises a curved lens.

5. The assembly of claim 1 wherein the view portion comprises a grooved lens.

6. The assembly of claim 1 wherein the view portion comprises a lens having a reflective coating.

7. The assembly of claim 1 wherein the view portion comprises a lens having includes a light refractive coating.

8. The assembly of claim 1 further comprising a signal mechanism secured to at least one of the lens element and the attachment element, the signal mechanism being effecting to alert a wearer of the assembly as to the presence of a nearby object or obstruction.

9. The assembly of claim 8 wherein the signal mechanism comprises at least one projection.

10. The assembly of claim 9 wherein the at least one projection comprises a plurality of projections.

11. The assembly of claim 9 wherein the at least one projection comprises a wire element.

12. The assembly of claim 9 wherein the at least one projection comprises a resilient wire element.

13. The assembly of claim 8 wherein the signal mechanism comprises an electronic sensor.

14. The assembly of claim 8 wherein the signal mechanism comprises a sonar device.

15. The assembly of claim 1 wherein the view portion comprises a hologram image.

16. A headwear assembly for use in water play, the assembly comprising:

a lens element; and

an attachment element coupled to the lens element and configured to effect a substantially water-tight seal with the face of a wearer;

the lens element being substantially entirely opaque and effective to prevent visible light from reaching the eyes of a wearer of the assembly.

17. The assembly of claim 16 further comprising a signal mechanism secured to at least one of the lens element and the attachment element, the signal mechanism being effecting to alert a wearer of the assembly as to the presence of a nearby object or obstruction.

18. The assembly of claim 17 wherein the signal mechanism comprises at least one projection.

19. The assembly of claim 18 wherein the at least one projection comprises a resilient wire element.

20. The assembly of claim 17 wherein the signal mechanism comprises a sonar unit.

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