US007722205B2

(12) **United States Patent**
Kim

(10) **Patent No.: US 7,722,205 B2**
(45) **Date of Patent: May 25, 2010**

(54) **HEADGEAR LIGHT**

(75) Inventor: **Paul Y. Kim**, Santa Ana, CA (US)

(73) Assignee: **Surefire, LLC**, Fountain Valley, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 947 days.

(21) Appl. No.: **11/331,779**

(22) Filed: **Jan. 12, 2006**

(65) **Prior Publication Data**

US 2007/0159810 A1 Jul. 12, 2007

(51) **Int. Cl.**
F21V 21/084 (2006.01)

(52) **U.S. Cl.** **362/106**; 362/191; 248/229.12

(58) **Field of Classification Search** 362/103, 362/105, 106, 108, 396, 190, 191, 197, 199, 362/269, 427, 457, 458; 248/229.13, 229.16, 248/231.81, 292.12, 292.13; 2/160, 209
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,506,685	A		5/1950	Sadloski et al.
3,112,889	A		12/1963	Marmo et al.
4,092,704	A		5/1978	Malm
4,186,429	A		1/1980	Johnston
4,195,328	A		3/1980	Harris, Jr.
4,199,802	A		4/1980	Malm
4,299,344	A	*	11/1981	Yamashita et al. 224/242
4,406,040	A		9/1983	Cannone
4,425,600	A	*	1/1984	Barnhart 362/84
4,521,831	A		6/1985	Thayer
4,648,131	A		3/1987	Kawaguchi et al.
4,689,834	A		9/1987	McCarthy et al.
4,760,373	A		7/1988	Reilly
4,769,629	A		9/1988	Tigwell
4,793,007	A		12/1988	Barnett
4,862,331	A		8/1989	Hanabusa
4,901,210	A		2/1990	Hanabusa
4,967,323	A		10/1990	Johnson et al.
5,284,345	A		2/1994	Jehn
5,327,588	A		7/1994	Garneau
5,331,684	A		7/1994	Baril et al.
5,367,408	A		11/1994	Corsan et al.
5,408,393	A		4/1995	Becker
5,426,792	A		6/1995	Murasko
5,460,346	A		10/1995	Hirsch
5,479,325	A		12/1995	Chien
5,485,358	A		1/1996	Chien
5,488,361	A		1/1996	Perry
5,608,919	A		3/1997	Case
5,648,862	A		7/1997	Owen
5,658,065	A		8/1997	Jamieson
5,664,868	A		9/1997	Montalbano et al.
5,667,292	A		9/1997	Sabalvaro, Jr.
5,738,432	A		4/1998	Okko et al.
5,755,367	A	*	5/1998	Yamada 224/245
5,758,947	A		6/1998	Glatt
5,853,242	A		12/1998	Bouffay et al.

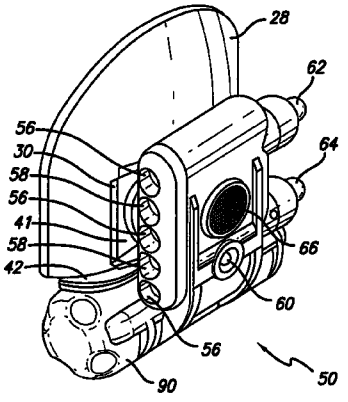
(Continued)

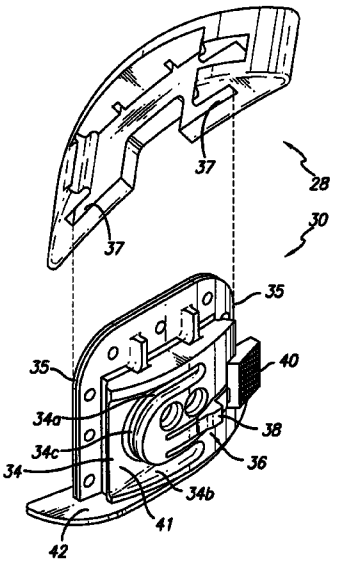
Primary Examiner—Gunyoung T Lee

(57) **ABSTRACT**

A headgear light comprising a light body removably securable to a headgear. The preferred embodiment of the light includes a mount assembly including a docking base that is removably attachable to a side of a helmet or other headgear, and provides visible light, invisible light, and friend-or-foe light signals. The light body is compact for easy storage and handling, and can be quickly and easily installed on and removed from the headgear with one hand and without visual reference.

38 Claims, 5 Drawing Sheets





U.S. PATENT DOCUMENTS

5,910,764	A	6/1999	Hayden	
6,113,244	A	9/2000	Baumgartner	
6,206,543	B1	3/2001	Henry	
6,213,619	B1	4/2001	Yu	
6,315,426	B1	11/2001	Buller, Jr.	
6,378,237	B1	4/2002	Matthews et al.	
6,388,390	B2 *	5/2002	Rachwal	315/200 R
6,439,733	B1	8/2002	Fischer et al.	
6,464,369	B1	10/2002	Vega et al.	
6,467,929	B2	10/2002	Lee	
6,574,901	B1	6/2003	Solinsky et al.	
6,616,294	B1	9/2003	Henry	
6,619,813	B1	9/2003	Schnell	
6,622,416	B2	9/2003	Kim	
6,648,489	B2	11/2003	Fischer et al.	
6,686,837	B2	2/2004	Kim	
6,705,038	B2	3/2004	Davenport et al.	
6,712,485	B2	3/2004	Matthews	
6,721,962	B1	4/2004	Polaire	
6,738,130	B1	5/2004	Chen	
6,752,299	B2	6/2004	Shetler et al.	
6,752,510	B1	6/2004	Appiah	
6,764,194	B1	7/2004	Cooper	
6,877,875	B2	4/2005	Yu et al.	
6,905,223	B2	6/2005	Halasz	
6,953,259	B2	10/2005	Parsons et al.	
7,040,783	B1	5/2006	Christianson	
7,048,403	B2	5/2006	Parker et al.	
7,070,295	B1	7/2006	Lee	
7,117,624	B2	10/2006	Kim	
2003/0227773	A1	12/2003	Yang	
2005/0174753	A1	8/2005	Cao et al.	

* cited by examiner

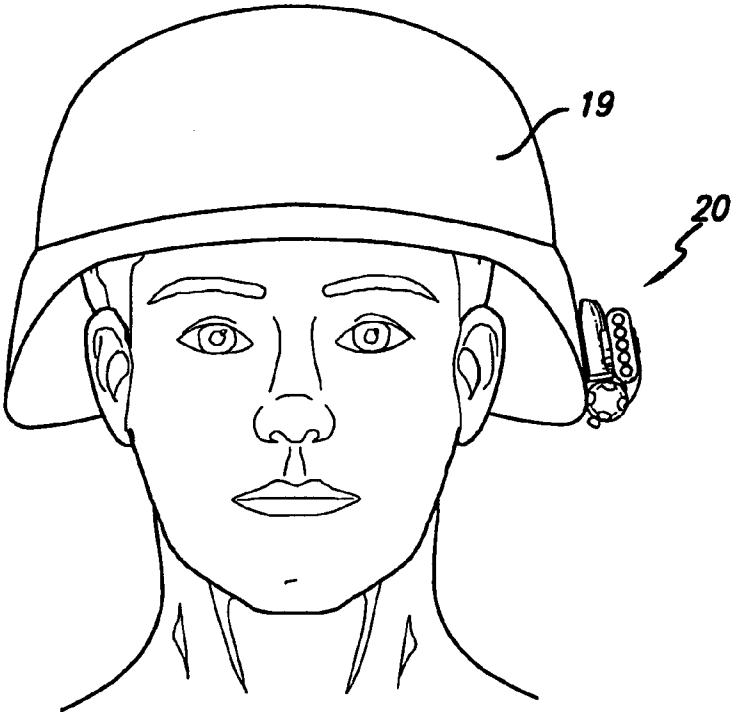


FIG. 1

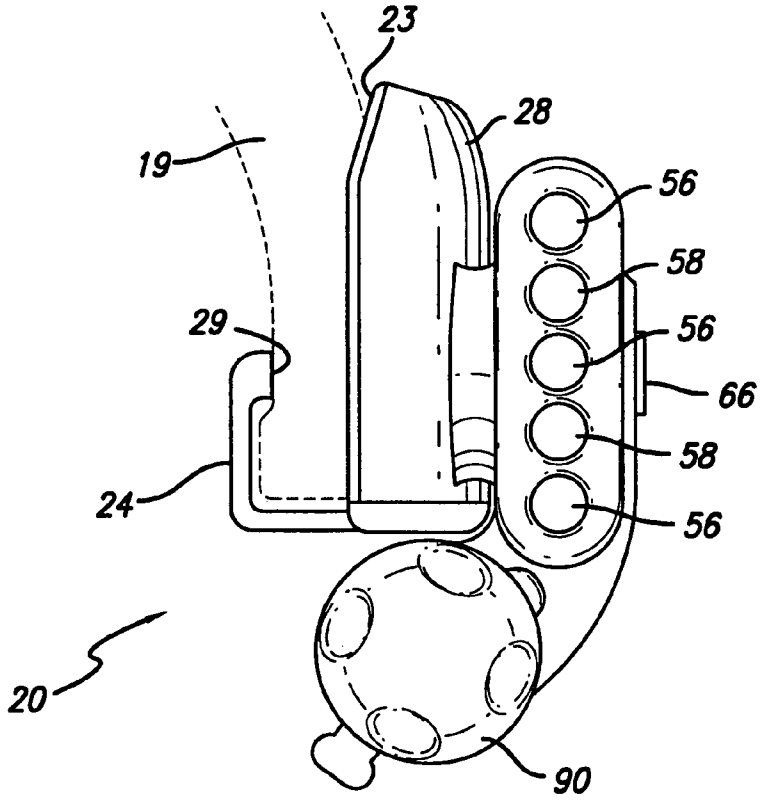


FIG. 2

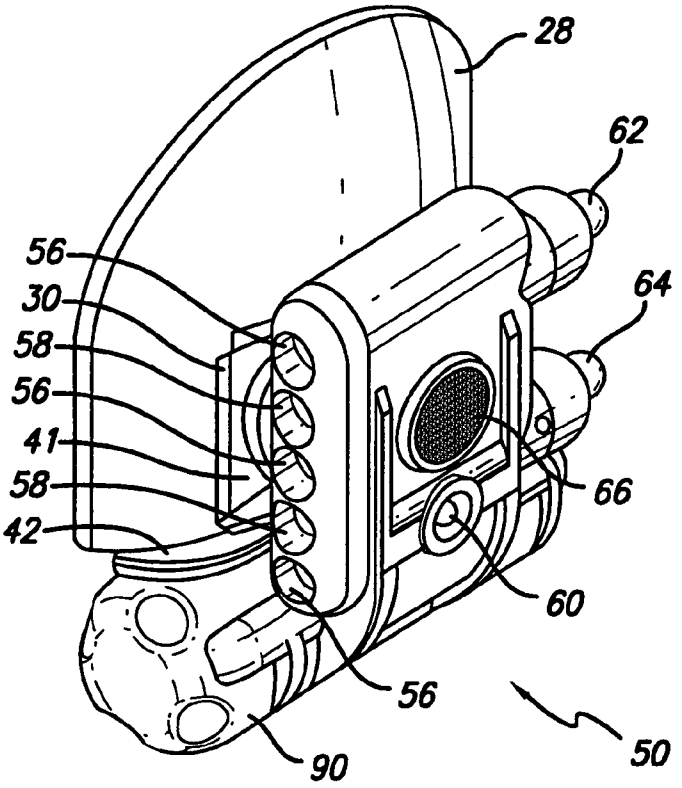

28
62
56
30
58
56
41
58
42
64
66
60
56
50
90

FIG. 3

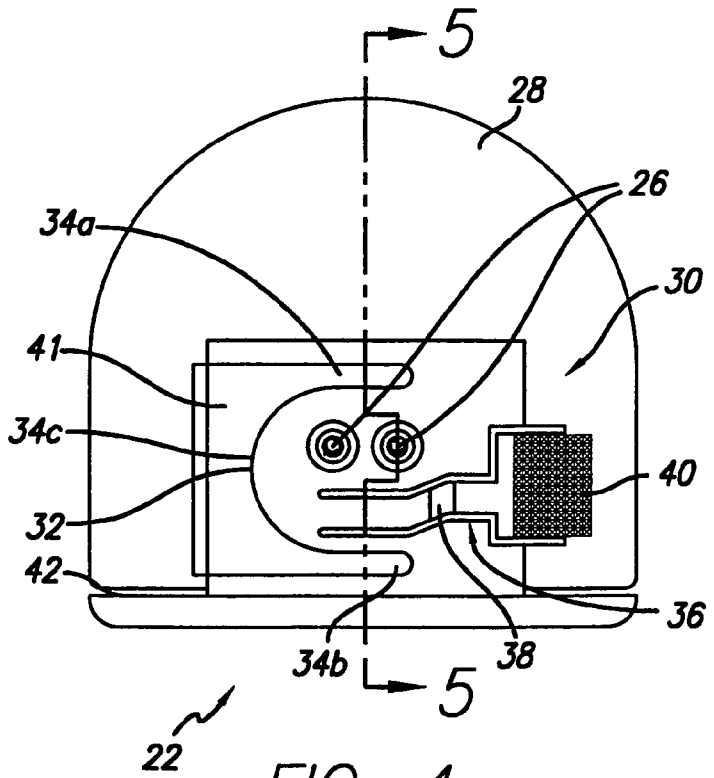

5
28
26
34a
30
41
34c
40
32
42
36
34b
38
5
22

FIG. 4

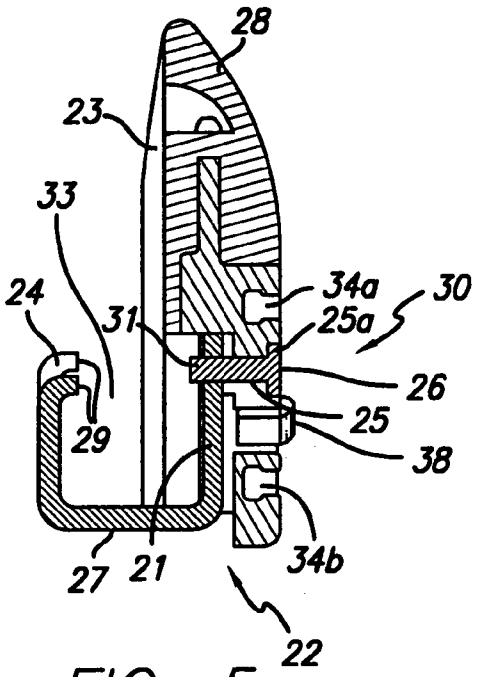

28
23
33
24
31
34a
30
25a
26
25
29
38
27
21
34b
22

FIG. 5

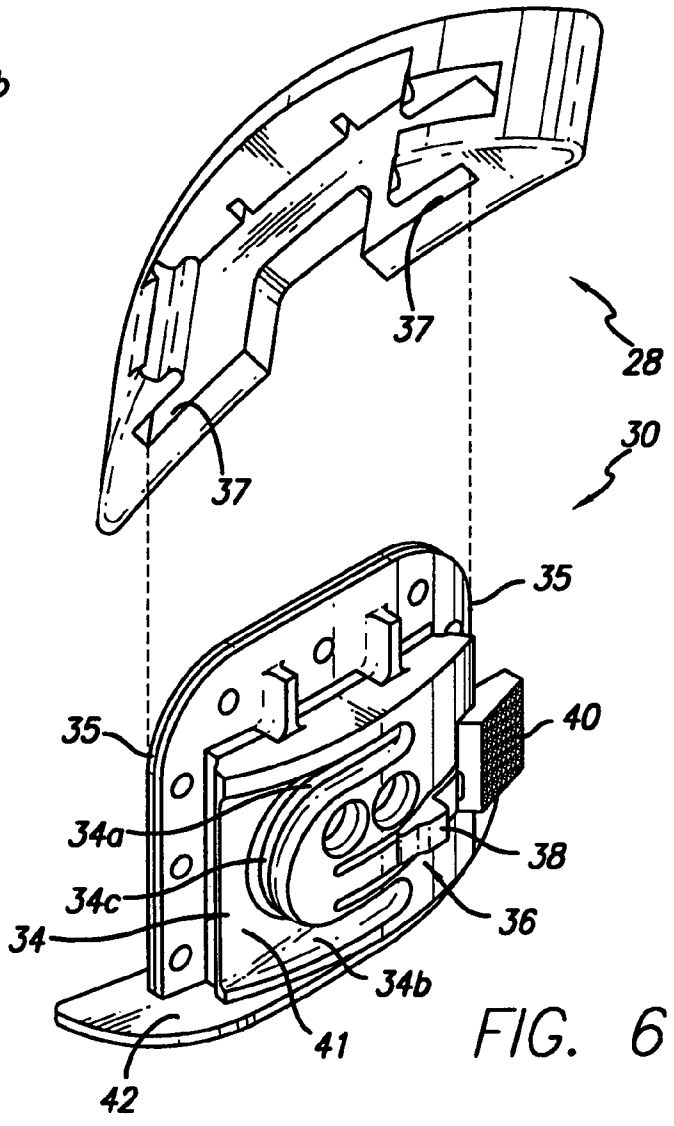

37
28
30
37
35
35
40
34a
38
34c
36
34
34b
41
42

FIG. 6

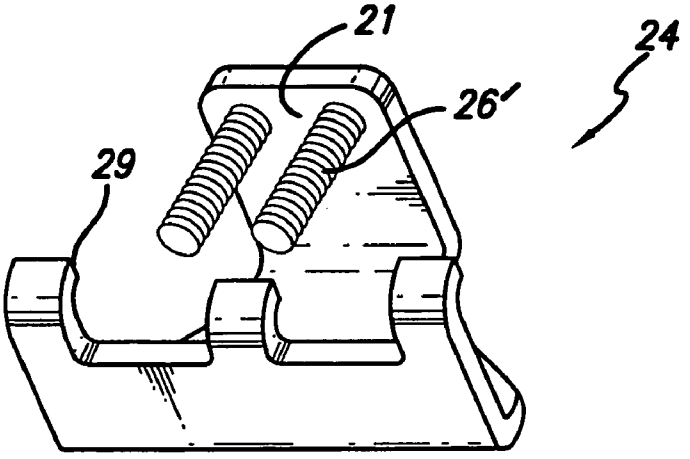


FIG. 7

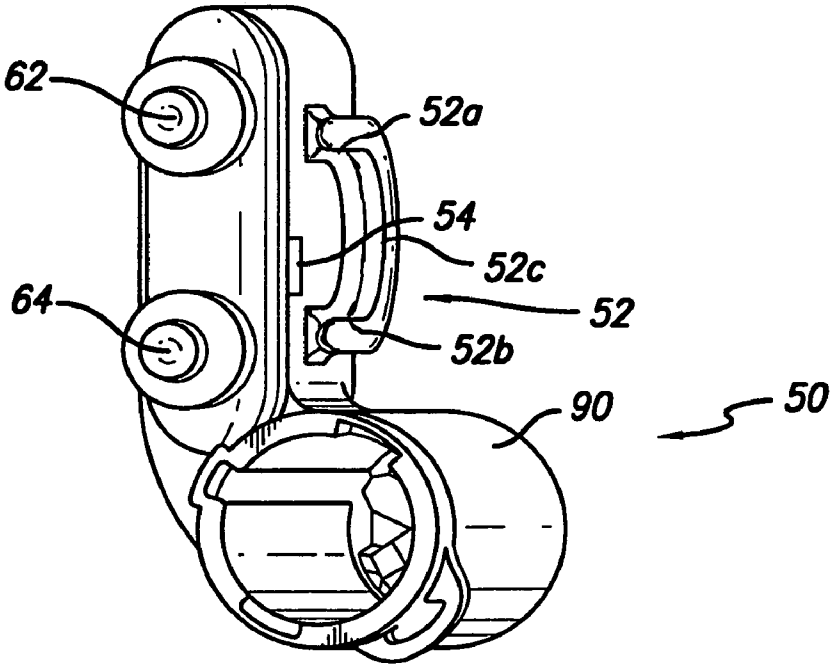


FIG. 8

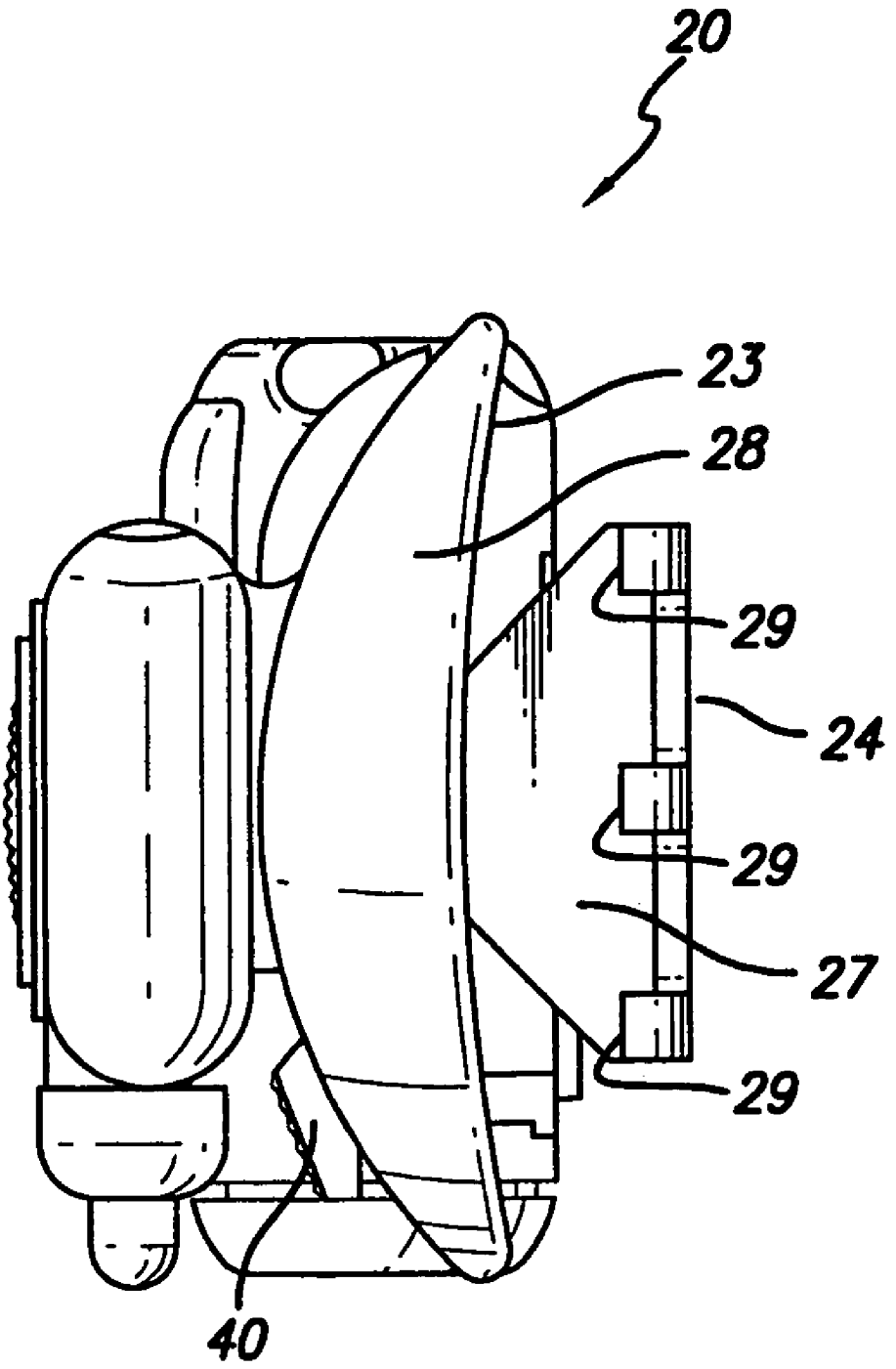


FIG. 9

HEADGEAR LIGHT

BACKGROUND OF THE INVENTION

The present invention pertains to mountable light assemblies and more particularly to a light that may be removably secured to a headgear such as a helmet.

Lights mounted on helmets and headgear have been known and used in many different forms. Examples of helmet-mounted lights include patents to: Malm, U.S. Pat. No. 4,092,704; Johnston, U.S. Pat. No. 4,186,429; Barnett, U.S. Pat. No. 4,793,007; Hanabusa, U.S. Pat. No. 4,862,331; Hanabusa, U.S. Pat. No. 4,901,210; Becker, U.S. Pat. No. 5,408,393; Case, U.S. Pat. No. 5,608,919; Fischer et al., U.S. Pat. No. 6,439,733 B1; Fischer et al., U.S. Pat. No. 6,648,489 B2; and Appiah, U.S. Pat. No. 6,752,510 B1. These patents teach a visible light in combination with a helmet or headgear. The inventions disclosed in these patents have various operational characteristics and require varying degrees of effort to remove or install the lights.

A clamp that mounts on the brim of a helmet is shown in U.S. Pat. No. 5,331,684 to Baril et al. One end of this clamp is made for attachment to the front of a standard army issue helmet and the other end of this clamp is made to accept standard issue night vision goggles. A device for mounting night vision goggles on a helmet is also shown in U.S. Pat. No. 4,689,834 to McCarthy et al.

What is needed and has not been found in the prior art or the foregoing patents, however, is a helmet or other headgear-mountable light that can be rigidly attached to the helmet or other headgear and includes a light body that can be readily removed or installed with one hand in a substantially continuous motion. Also not taught in the prior art is the ability to complete such installation and removal without visual reference while the helmet or headgear is being worn. There has also been a need for a helmet or other headgear in combination with a light that provides visible light, invisible light, and/or Identify Friend or Foe ("IFF") light. Side mounting capability in combination with invisible light and/or IFF light is also not taught in the prior art. Also not taught in the prior art is such a combination that is small enough so that the light body can be readily manipulated with one hand and stored in a pants or shirt pocket.

SUMMARY OF THE INVENTION

According to an aspect of the present invention, a helmet or headgear-mounted light includes a mount assembly and a light body. The light body provides one or more of the following in any combination: a visible light source, a night vision light source that may be in the visible or invisible range, and/or an IFF light source. In a preferred embodiment, the helmet to be used is standard government-issue to the armed forces. The mount assembly is designed to be securely attached to the brim of the helmet with the light sources facing generally forward. This enables the present invention to be mounted on the side of the helmet or headgear or in some other location where it will not interfere with other helmet-mounted devices such as night-vision goggles.

In the preferred embodiment, the light body includes a battery housing for a battery comprising at least one battery cell for supplying power as needed to energize the light sources.

According to a preferred embodiment of the present invention, the visible light source has three levels of intensity allowing the user to illuminate the area being faced with different levels of brightness. Depending upon the tactical situation, it may be desirable to use low levels of light for navigation purposes or for investigating dark areas without necessarily compromising security. In other situations, in which user security is not a consideration, higher levels of brightness may be used to illuminate areas that may conceal hazardous conditions.

A night vision light source, such as invisible infrared or visible red, can be used for area illumination in situations where night vision capability must be maintained and where night vision devices and/or infrared capable cameras may be in use.

In the preferred embodiment, the IFF light can be a blinking green LED with a predetermined repetition rate. In hostile environments where reliable audible communication is not feasible, the flashing green light signals the presence of an individual whose identity is that of a "friend," assuming that the signaling device has not fallen into hostile hands. Alternatively, the IFF light can be infrared or other invisible light.

In the preferred embodiment, the mount assembly includes a mounting bracket, mounting screws, a docking base, and a resilient pad. The docking base serves as a quick-release platform upon which the light body can be quickly and rigidly attached and quickly removed. The mounting screws secure the docking base to the mounting bracket. In an alternative embodiment, the mounting screws secure the mounting bracket to the helmet or headgear.

The docking base includes attachment channels that engage complementary attachment rails that are part of the light body. The docking base also includes a quick-release lever that has a latch and a quick-release button. The latch engages a catch or slot on the light body to keep the light body attached to the docking base.

When a user depresses the quick-release button, the latch is disengaged from the slot, thereby allowing the light body to be removed from the docking base by a simple sliding motion. The quick-release lever is resilient and the latch is preferably tapered, so that together they act to allow the latch to automatically reengage the catch when the light body is slid back onto the docking base.

The light body typically includes a visible light source, a night vision light source, and an IFF light source. The night vision light source preferably provides light such as invisible infrared, but may instead be a visible red light that is compatible with night vision devices while providing low level area illumination. In the preferred embodiment, LED's are the light sources because of their low power consumption and long life. The visible light source and the night vision light source are typically controlled by a single three-position switch that either activates (1) only visible lighting, (2) only night vision lighting, or (3) neither. The IFF light source is typically controlled by a separate, dedicated on/off switch. The light body of the preferred embodiment is also provided with a brightness control for varying the brightness of the visible light.

Accordingly, a light according to a preferred embodiment of the present invention comprises: a mount assembly removably attachable to a headgear such as a helmet, the mount assembly including a docking base adapted to lockably engage a light body; and a light body adapted to lockably engage the docking base, the light body including at least one light source.

According to another aspect of the present invention a preferred light embodiment comprises: a mount assembly removably attachable to a headgear and including a docking base; a light body including at least one light source; and a first attachment device carried by the docking base and a second attachment device carried by the light body, the first

attachment device and the second attachment device adapted for cooperatively attaching the light body to the mount assembly when the light body is applied to the docking base and displaced in a predetermined direction with respect thereto.

According to a further aspect of the present invention, there is provided light apparatus comprising: a mount assembly removably attachable to a headgear such as a helmet and including a docking base; a light body including at least one light source; and the mount assembly and the light body adapted to be automatically locked to one another when the light body is applied to the docking base and displaced in a predetermined direction along the docking base. One of the mount assembly and the light body includes an actuator for unlocking the light body from the docking base; and the mount assembly and the light body are adapted to be detached from one another when the actuator is actuated and the light body is displaced in a direction opposite the predetermined direction along the docking base. In a preferred example, one of the docking base and the light body includes a channel and the other of the docking base and the light body includes a rail complementary to the channel for slidably engaging the light body along the docking base.

According to yet another aspect of the present invention, there is provided a light apparatus comprising: a headgear; a docking base secured to the headgear; a light body including at least one light source; and the docking base and the light body adapted to be automatically locked to one another when the light body is applied to the docking base and displaced in a predetermined direction along the docking base.

A preferred manner of practicing the present invention is provided by a method of attaching a light to a headgear, comprising: providing a headgear with a docking base; providing a light body including at least one light source; placing the headgear on a user's head; the user grasping the light body with one hand and, in a substantially continuous motion of that one hand, aligning the light body with the docking base, sliding the light body onto the docking base, and releasably locking the light body to the docking base. When the user desires to remove the light body from the headgear, the method continues by the user grasping the light body with one hand, and in a substantially continuous motion of that one hand, unlocking the light body from the docking base and sliding the light body off the docking base. The sliding and locking steps during installation of the light body to the docking base, and the unlocking and sliding steps during removal of the light body from the docking base, may be performed without visual reference by the user.

The step of providing the headgear with the docking base may include: providing a headgear; providing a mount assembly including the docking base; and securing the mount assembly to a side of the headgear. During the headgear providing step, the headgear may comprise a helmet.

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features which are characteristic of the invention, both as to structure and method of operation thereof, together with further advantages thereof, will be understood from the following description, considered in connection with the accompanying drawings, in which the preferred embodiment of the invention is illustrated by way of example. It is to be expressly understood, however, that the drawings are for illustration and description only and not as a definition of the limits or scope of the invention.

FIG. **1** is a front view of a preferred embodiment of a light assembly according to the instant invention installed on the brim of a helmet as worn by an individual;

FIG. **2** is a front view of the preferred light of FIG. **1** shown in increased scale as mounted on the brim of a helmet;

FIG. **3** is a perspective view of the preferred light embodiment of FIG. **2**;

FIG. **4** is a side elevation view of a mount assembly included in the light of FIG. **2**;

FIG. **5** is a sectional view of the mount assembly of FIG. **4** taken along the line **5-5** and viewed in the direction of the appended arrows;

FIG. **6** is an exploded perspective view of the docking base and resilient pad of the mount assembly;

FIG. **7** is a perspective view of the helmet mounting bracket of the mount assembly of FIG. **5**;

FIG. **8** is a rear perspective view of the light body of the light of FIG. **2**; and

FIG. **9** is a top view of the light of FIG. **2**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In the following description, a specific arrangement, construction, and other details are set forth in order to provide a more thorough understanding of the instant invention. It will be apparent to those skilled in the art that the instant invention may be practiced without these specific details and that other embodiments are within the scope of the instant invention.

FIGS. **1-9** show a preferred embodiment of a light apparatus or light **20** of the instant invention. FIG. **1** shows an individual wearing a helmet **19** with a light **20** of the present invention mounted on the helmet. As best seen in FIGS. **4**, **5**, **6**, and **7**, the preferred embodiment of the light **20** includes a mount assembly **22** comprising a mounting bracket **24** with mounting prongs **29** spaced from an opposing plate **21**, mounting screws **26** threaded through threaded apertures in the opposing plate **21**, a docking base **30**, and a resilient pad **28**. The resilient pad **28** is preferably of an elastomeric material such as neoprene, and has a contact surface **23** that contacts the outer surface of a helmet **19** or headgear. In an alternative embodiment, the resilient pad **28** is optional and need not be included in the mount assembly **22**.

FIG. **1** shows the overall size of the preferred embodiment of the light **20**. In this preferred embodiment, the overall size is less than 2.5 inches by 2.5 inches by 1.5 inches. This size is well-suited for achieving an objective of the instant invention which is to provide a helmet-mountable light that can be readily installed to or removed from a helmet or other headgear with only one hand and without visual reference.

As shown in FIG. **5**, in the preferred embodiment the headed attachment screws **26** attach the docking base **30** to the opposing plate **21** of the mounting bracket **24**, the screws **26** extending through bores **25** in the docking base **30** with the screw heads restrained by the annular ledge of the counterbores **25***a*. The docking base **30** and the resilient pad **28** are secured together, with portions **35** of the docking base **30** being fitted into slots **37** in the pad **28** (FIG. **6**). The screws **26** are short enough so that they do not contact the helmet **19** in this embodiment, and the gap **33** between the mounting prongs **29** and the pad contact surface **23** produces a loose fit with the helmet **19** when the mount assembly **22** is applied to the helmet **19**. It may be appreciated that tightening of the screws **26** into the threaded apertures **31** of the plate **21** pulls the prongs **29** against the inner surface of the helmet **19**. Further tightening of the screws **25** urges the docking base **30** and its secured resilient pad **28** inwardly toward the helmet **19**, compressing the secured resilient pad **28** against the outer surface of the helmet **19** and clamping the helmet **19** between

the prongs **29** and the pad **28**. In this manner, the mount assembly **22** is securely mounted to the helmet **19** or other headgear.

To install the preferred embodiment of the mount assembly **22** on the helmet **19**, a user pushes the mount assembly **22** onto the brim of the helmet **19** with the triangularly arranged bracket prongs **29** facing the inner surface of the helmet **19** and the resilient pad's contact surface **23** facing the helmet's outer surface, and with the lower bracket portion **27** facing and preferably engaging the edge of the helmet's brim. The user thereupon tightens the screws **26** as described above, securing the mount assembly including the docking base **30** to the helmet **19**.

The resilient nature of the resilient pad **28** allows it to compressively fit differing helmet **19** or other headgear thicknesses, as well as to accommodate irregularities in the outer surface of the helmet **19** or other headgear. This resilient nature further enables the resilient pad **28** to conform to differing curvature due to differing mounting locations or differing sizes of helmet **19** or other headgear.

To install an alternative embodiment of the mount assembly **22** having screws **26'** that are long enough to contact the helmet **19** or headgear, the mount assembly **22** is installed by first loosening the screws **26'** until the distance between the mounting prongs **29** and the tips of the screws **26'** is large enough to clear the brim of the helmet **19**. The mount assembly **22** is then pushed onto the brim of the helmet **19** with the prongs **29** facing the helmet's inner surface and the ends of the screws **26'** facing the helmet's outer surface, with the lower bracket portion **27** facing and preferably engaging the edge of the brim. The screws **26'** are then tightened until they contact the helmet's outer surface, forcing the prongs **29** against the helmet's inner surface and clamping the mount assembly **22** to the helmet **19**. In this alternative embodiment, the securement function of the resilient pad **28** is decreased, and the resilient pad may be omitted from this embodiment if desired.

The docking base **30**, best seen in FIGS. **4**, **5**, and **6**, includes a first attachment device on a side of the docking base **30**, for cooperating with a second attachment device on a side of the light body **50** as shown in FIG. **8**, for quickly and rigidly installing the light body **50** on the docking base **30** and for quickly removing the light body **50** therefrom. In the preferred embodiment, the docking base attachment device includes an attachment guide **32**, an attachment channel **34**, and a quick-release latching lever **36** with latch **38** and quick-release button **40**. A "vertical" landing area **41** and a "horizontal" landing area **42** may also be included in the docking base **30**.

The preferred attachment device of the light body **50**, for rigidly attaching the light body **50** to the docking base **30**, includes an attachment rail **52** on the light body **50** that engages the attachment channel **34** in the docking base **30**. The attachment rail **52** comprises two parallel spaced-apart attachment rails **52***a* and **52***b* that are joined together at one end with a continuous U-shaped rail **52***c* and that are open at their other end.

The attachment channel **34** comprises two parallel spaced-apart attachment channels **34***a* and **34***b* joined together at one end with a continuous U-shaped channel **34***c* and that are closed at their other end. Once the attachment rails **52** are fully engaged with the attachment channels **34**, the light body **50** is held in full engagement by a locking device preferably comprising the latching lever **36** with the latch **38** that automatically engages a catch or slot **54** in the light body **50**. Once the latch **38** has automatically engaged the slot **54**, the light body **50** is in locked engagement with the docking base **30**.

In the preferred embodiment, the light body **50** has a visible light source **56**, e.g., a high luminous flux LED, a night vision light source **58**, e.g., an invisible infrared LED or a visible red LED, and an IFF light source **60**. A single three-position toggle switch **62** typically controls the visible light source **56** and the night vision light source **58**. A separate switch **64** typically controls the IFF light source **60**.

For security purposes, the IFF light source **60** is preferably invisible but may be of any color and may blink at any frequency or in any pattern. Such blinking constitutes an intermittent operation and the interval and duration of intermittence may be varied in any manner to achieve any desired blinking pattern.

In the preferred embodiment, a brightness control button **66** controls the brightness of the visible light source **56**. Each instance of depressing the brightness button **66** activates, in fixed sequence, one of three levels in a brightness cycle, namely, low, medium, and high. The visible light source **56**, night vision light source **58**, and IFF light source **60** are all typically powered by a single battery, e.g., a 3 volt lithium battery, carried in the light body **50**.

Once the mount assembly **22** is secured to the brim of the helmet **19**, preferably along a side of the helmet **19**, an individual wearing the helmet **19** can readily install the light body **50** on, or remove the light body **50** from, the mount assembly **22** in a substantially continuous one-handed motion, using the hand at the same side of the helmet on which the mount assembly **22** is mounted. An individual can complete such installation and removal of the light body **50** in total darkness without the need to make any visual contact with the light **20** or the helmet **19**.

To install the light body **50** on the mount assembly **22**, the light body **50** is held in one hand and the attachment rails **52** are aligned with the attachment channels **34**. The battery housing **90** may assist the user in orienting the light body **50** so that the attachment rails **52** are roughly aligned with the attachment channels **34**.

The U-shaped guide **32** of the attachment channels **34** acts as an automatic self-centering mechanism to ensure easy engagement of the attachment rails **52** with the attachment channels **34**. This U-shaped guide **32** is large enough so that a user can locate it by feel with a single hand and without the need for visual reference or assistance. A "vertical" landing area **41** and a "horizontal" landing area **42** are both located near the U-shaped guide **32** and each such area provides a tactile reference point that can assist the user in properly aligning the attachment rails **52** with the attachment channels **34**.

Once the user aligns the attachment rails **52***a*, **52***b* with the attachment channels **34***a*, **34***b*, the light body **50** can then be installed on the docking base **30** by simply pushing the light body **50** toward the quick-release button **40** (i.e., in a rearward direction) until the light body **50** can be pushed no further. The light body **50** is stopped from making contact with the quick-release button **40** because the attachment rails **52** are prevented from further movement by the presence of the U-shaped rail **52***c* coming into contact with the U-shaped channel **34***c*. The light body **50** is further stopped from making contact with the quick-release button **40** because the attachment rails **52** are prevented from further movement by the presence of the closed end of the attachment channels **34***a* and **34***b*. As the light body **50** reaches this position, the light body **50** trips the latch **38** of the resilient latching lever **36** to engage the catch or slot **54**, automatically and releasably locking the light body **50** to the docking base **30**.

As previously noted, the latch **38** and quick-release button **40** are both located on the quick-release latching lever **36** that

is part of the docking base **30**. The quick-release lever **36** is resilient so that when the quick-release lever **36** is operated, the quick-release lever **36** automatically returns toward the position it was in prior to being actuated. The latch **38** is tapered so that as the light body **50** is pushed onto the docking base **30**, the light body **50** moves across the taper of the latch **38** thereby displacing the latch **38**.

When the light body **50** reaches the point where the attachment rails **52** fully engage the attachment channels **34**, the catch or slot **54** on the light body **50** is then in a position such that the latch **38** automatically springs into engagement with the slot **54**. This engagement keeps the light body **50** rigidly attached to the docking base **30** and, in turn, the mount assembly **22**. The taper of the latch **38** and the raised position of the latch **38** in its normal state can be seen in FIGS. **4** and **6**.

The latch **38** is disengaged from the slot **54** by depressing the quick-release button **40** and simultaneously sliding the light body **50** in a direction away from the quick-release button **40**. Depressing the quick-release button **40** causes the latch **38** to move away from the slot **54** until the latch **38** is completely clear of the slot **54**. At this point, the light body **50** can be pulled free and clear of the docking base **30**.

The location of the quick-release button **40** with respect to the light body **50** and mount assembly **22** is best seen in FIG. **9**. It may be appreciated that, to remove the light body **50** from the docking base **30**, the user may grasp the light body with one hand while, with the thumb or a finger of the same hand, simultaneously depress the quick-release button **40** and slide the light body **50** forward along the channels **34***a*, **34***b* of docking base **30** until the light body **50** is removed from the docking base **30**.

The foregoing description is for illustrative purposes only. It will be apparent to those skilled in the art that various changes and modifications can be made to the instant invention without departing from the overall spirit and scope of the instant invention. It is in that context that the following claims are made.

What I claim as my invention is:

1. Light apparatus comprising:

a headgear;

a mount assembly removably attached to said headgear and including a docking base;

a light body including at least one light source;

two spaced-apart parallel attachment channels on a side of one of said docking base and said light body;

two spaced-apart parallel attachment rails on a side of the other one of said docking base and said light body, said parallel rails complementary to said parallel channels, said parallel rails aligned with said parallel channels when said light body is applied to said docking base;

said parallel rails and said parallel channels slideably engageable therealong for attaching said light body to said docking base;

said docking base and said light body include a locking device automatically locking said light body to said docking base when said light body is displaced with respect to said docking base in a first direction along said parallel rails engaged with said parallel channels; and

one of said docking base and said light body includes an actuator for releasing said light body from said docking base when actuated and said light body is displaced with respect to said docking base in a second direction opposite said first direction.

2. The light apparatus according to claim **1**, wherein:

said actuator comprises a lever.

3. The light apparatus according to claim **1**, wherein:

said first direction is a generally rearward direction when said headgear with said mount assembly attached thereto is worn by a user.

4. The light apparatus according to claim **1**, wherein:

said two parallel channels are on a side of said docking base; and

said two parallel rails are on a side of said light body.

5. The light apparatus according to claim **1**, including:

a U-shaped channel on said side of said one of said docking base and said light body, said U-shaped channel joining said two parallel channels; and

a U-shaped rail on said side of said other one of said docking base and said light body, said U-shaped rail complementary to said U-shaped channel and joining said two parallel rails.

6. The light apparatus according to claim **5**, wherein:

said locking device includes a latching lever on said docking base automatically locking said light body to said docking base when said U-shaped rail engages said U-shaped channel.

7. The light apparatus according to claim **4**, including:

a U-shaped channel on said side of said docking base and joining said two parallel channels; and

a U-shaped rail on said side of said light body, said U-shaped rail complementary to said U-shaped channel and joining said two parallel rails.

8. The light apparatus according to claim **7**, wherein:

said locking device includes a latching lever on said docking base automatically locking said light body to said docking base when said U-shaped rail engages said U-shaped channel.

9. The light apparatus according to claim **1**, wherein:

said headgear comprises a helmet.

10. The light apparatus according to claim **1**, wherein:

said mount assembly is removably attached to a side of said headgear.

11. The light apparatus according to claim **1**, wherein:

said mount assembly includes a bracket secured to said docking base and removably attached to said headgear.

12. The light apparatus according to claim **11**, wherein:

said mount assembly includes a resilient pad secured to said docking base and engaging said headgear when said bracket is attached to said headgear.

13. The light apparatus according to claim **1**, wherein:

said at least one light source produces visible light.

14. The light apparatus according to claim **1**, wherein:

said at least one light source produces invisible light.

15. The light apparatus according to claim **1**, wherein:

said at least one light source produces intermittent light.

16. The light apparatus according to claim **1**, wherein:

said at least one light source produces visible light and invisible light.

17. The light apparatus according to claim **1**, wherein:

said at least one light source produces visible light and intermittent light.

18. The light apparatus according to claim **1**, wherein:

said at least one light source produces invisible light and intermittent light.

19. The light apparatus according to claim **1**, wherein:

said at least one light source produces visible light, invisible light and intermittent light.

20. The light apparatus according to claim **13**, wherein:

said light body includes a control for varying the brightness of the visible light.

21. The light apparatus according to claim 1, wherein:
said at least one light source produces Identify Friend or Foe signals.

22. The light apparatus according to claim 13, wherein:
said at least one light source produces Identify Friend or Foe signals.

23. The light apparatus according to claim 14, wherein:
said at least one light source produces Identify Friend or Foe signals.

24. The light apparatus according to claim 16, wherein:
said at least one light source produces Identify Friend or Foe signals.

25. The light apparatus according to claim 1, wherein:
said at least one light source produces night vision light.

26. The light apparatus according to claim 1, wherein:
said two parallel channels are on a side of said docking base, said docking base including a U-shaped channel on said side of said docking base and joining said two parallel channels for guiding said two parallel rails to engage said two parallel channels when said light body is applied to said docking base.

27. A method of attaching a light to a headgear, comprising:
providing a headgear with a docking base, said docking base including an attachment channel device on a side of said docking base, said attachment channel device including two spaced-apart parallel channels;
providing a light body including at least one light source, said light body including an attachment rail device on a side of said light body, said attachment rail device including two spaced-apart parallel rails;
placing said headgear on a user's head with said docking base positioned to a side of the user;
the user grasping said light body with one hand and, in a substantially continuous motion of that one hand,
aligning said parallel rails of said light body with said parallel channels of said docking base,
rearwardly sliding said light body onto said docking base with said parallel rails engaging said parallel channels, and
releasably locking said light body to said docking base with said parallel rails engaging said parallel channels; and
the user grasping said light body with one hand and, in a substantially continuous motion of that one hand,
unlocking said light body from said docking base, and
forwardly sliding said light body off the said docking base.

28. The method of claim 27, wherein the aligning step is performed without visual reference by the user.

29. The method of claim 27, wherein the sliding and locking steps are performed without visual reference by the user.

30. The method of claim 27, wherein said light body includes a battery housing, and the aligning step includes the user tactually using said battery housing to orient said light body with respect to said docking base.

31. The method of claim 27, wherein the unlocking and sliding steps are performed without visual reference by the user.

32. The method according to claim 27, wherein the step of providing a headgear with a docking base includes:
providing a headgear;
providing a mount assembly including said docking base; and
securing said mount assembly to a side of said headgear.

33. The method according to claim 32, wherein:
during the headgear providing step, said headgear comprises a helmet.

34. A method of attaching a light to a headgear, comprising:
providing a headgear with a docking base;
providing a light body;
one of said docking base and light body including on a side thereof two spaced-apart parallel attachment channels, and the other of said docking base and said light body including on a side thereof two spaced-apart parallel attachment rails;
placing said headgear on a user's head with said docking base positioned to a side of the user;
the user grasping said light body with one hand and, in a substantially continuous motion of that one hand,
aligning said parallel rails and said parallel channels;
sliding said light body in a first direction onto said docking base with said parallel rails engaging said parallel channels, and
releasably locking said light body to said docking base with said parallel rails engaging said parallel channels; and
the user grasping said light body with one hand and, in a substantially continuous motion of that one hand,
unlocking said light body from said docking base, and
sliding said light body off said docking base in a second direction opposite said first direction.

35. The method according to claim 34, wherein:
said first direction is a generally rearward direction and said second direction is a generally forward direction.

36. The method according to claim 34, wherein:
said two parallel channels are on a side of said docking base and said two parallel rails are on a side of said light body.

37. The method of claim 34, wherein:
the unlocking and sliding steps are performed without visual reference by the user.

38. The method according to claim 34, wherein the step of providing a headgear with a docking base includes:
providing a headgear;
providing a mount assembly including said docking base; and
securing said mount assembly to a side of said headgear.

* * * * *