

Exhibit A

Knobbe Martens Olson & Bear LLP

Intellectual Property Law

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Michael K. Friedland
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March 7, 2012

VIA FEDERAL EXPRESS

Ned Post
President, COO
Smith Optics, Inc.
280 Northwood Way
Ketchum, Idaho 83340

Re: Oakley, Inc. and Eye Safety Systems, Inc.'s Intellectual Property
Our Reference No.: OAKLY1.519IS

Dear Mr. Post:

We represent Oakley, Inc. ("Oakley") and Eye Safety Systems, Inc. ("ESS") in connection with intellectual property matters. As you know, Oakley and ESS have each pioneered a variety of innovations in the field of eyewear and related accessories. Both Oakley and ESS have invested considerable resources into the development of their proprietary technology. In order to protect this investment, Oakley and ESS have each obtained numerous trademarks and patents. Oakley is the owner of U.S. Patent Nos. D581,450 (the "D450 patent") and D616,919 (the "D919 patent"). ESS is the owner of U.S. Patent No. 6,708,340 (the "'340 patent").

Under 35 U.S.C. § 271, any entity that, without permission, makes, uses, offers to sell, sells, or imports a product covered by any claim of a patent infringes that patent. Oakley and ESS both take infringement of their patent rights very seriously. We have determined that Smith's *Chemist* eyewear infringes the claim of Oakley's D450 patent. We have further determined that Smith's *Lockwood* eyewear infringes the claim of Oakley's D919 patent. We have also determined that Smith's *OTW Quick Strap* product infringes at least claim 1 of ESS' '340 patent.

We demand that you immediately cease further infringement of Oakley and ESS' respective intellectual property rights. We also demand that you pay to Oakley and ESS, respectively, any and all damages pursuant to 35 U.S.C. §§ 284 and 289 that are sufficient to compensate for their losses. In order to determine the amount of these damages, we further demand that you account to us for all sales of infringing products.

We request that you provide this information and confirm by **March 23, 2012** that you will fully comply with Oakley and ESS' demands to cease infringing. Otherwise, we will file the

San Diego
858-707-4000

San Francisco
415-954-4114

Los Angeles
310-551-3450

Riverside
951-781-9231

Seattle
206-405-2000

Washington, DC
202-640-6400

Silicon Valley
650-752-1100

Knobbe Martens Olson & Bear LLP

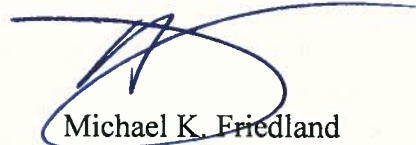
Ned Post

March 7, 2012

Page -2-

enclosed Complaint in Federal Court. Any further sales of infringing products will constitute additional evidence of willful infringement, which may entitle Oakley and/or ESS to recover enhanced monetary damages, including treble damages and attorneys' fees.

Very Truly Yours,



Michael K. Friedland

Enclosures:

- Complaint for Patent Infringement
- U.S. Design Patent No. D581,450
- U.S. Design Patent No. D616,919
- U.S. Patent No. 6,708,340

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5 2040 Main Street, Fourteenth Floor
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6 Telephone: (949) 760-0404
Facsimile: (949) 760-9502

7 Attorneys for Plaintiffs Oakley, Inc. and Eye Safety Systems, Inc.
8
9

10 IN THE UNITED STATES DISTRICT COURT
11 FOR THE CENTRAL DISTRICT OF CALIFORNIA
12

13 OAKLEY, INC., a Washington
corporation; EYE SAFETY SYSTEMS,
14 INC., a Delaware corporation,

15 Plaintiffs,

16 v.

17 SMITH OPTICS, INC., an Idaho
corporation.

18 Defendant.
19

Civil Action No.

**COMPLAINT FOR
PATENT INFRINGEMENT**

DEMAND FOR JURY TRIAL

1 Plaintiffs Oakley, Inc. ("Oakley") and Eye Safety Systems, Inc. ("ESS")
2 (collectively, "Plaintiffs") hereby complain of Defendant Smith Optics, Inc.
3 ("Smith") and allege as follows:

4 **I. JURISDICTION AND VENUE**

5 1. This Court has subject matter jurisdiction over this action pursuant
6 to 28 U.S.C. §§ 1331 and 1338, as it arises under the patent laws of the United
7 States.

8 2. This Court has personal jurisdiction over Defendant because
9 Defendant has a continuous, systematic, and substantial presence within this
10 judicial district including by selling and offering for sale infringing eyewear and
11 eyewear accessories in this judicial district, and by committing acts of patent
12 infringement in this judicial district, including but not limited to selling
13 infringing eyewear and eyewear accessories directly to consumers and/or
14 retailers in this district and selling into the stream of commerce knowing such
15 products would be sold in California and this district, which acts form a
16 substantial part of the events or omissions giving rise to Plaintiffs' claim.

17 3. Venue is proper in this judicial district under 28 U.S.C. § 1391 (b)
18 and (c), and 28 U.S.C. § 1400(b).

19 **II. THE PARTIES**

20 4. Plaintiff Oakley is a corporation organized and existing under the
21 laws of the State of Washington, having its principal place of business at One
22 Icon, Foothill Ranch, California 92610.

23 5. Plaintiff ESS is a corporation organized and existing under the laws
24 of the State of Delaware, having its principal place of business at 160 7th Street
25 West, Cimarron Building, Ketchum, Idaho 83340.

26 6. Plaintiffs are informed and believe, and thereon allege, that
27 Defendant Smith is a corporation organized and existing under the laws of the
28 state of Idaho and has a principal place of business at 280 Northwood Way,

1 Ketchum, Idaho 83340.

2 7. Plaintiffs are informed and believe, and thereon allege, that
3 Defendant has committed the acts alleged herein within this judicial district.

4 **III. GENERAL ALLEGATIONS**

5 8. Oakley has been actively engaged in the manufacture and sale of
6 high quality eyewear since at least 1985. Oakley is the manufacturer and
7 retailer of several lines of eyewear that have enjoyed substantial success and are
8 protected by various intellectual property rights owned by Oakley.

9 9. ESS is a wholly-owned subsidiary of Oakley and is engaged in the
10 manufacture and sale of protective eyewear and related accessories. ESS is the
11 manufacturer and retailer of several lines of eyewear and eyewear accessories
12 that have enjoyed substantial success and are protected by various intellectual
13 property rights owned by ESS.

14 10. On November 25, 2008, the United States Patent and Trademark
15 Office duly and lawfully issued United States Design Patent No. D581,450 (“the
16 D450 patent”), entitled “Eyeglass.” Oakley is the owner by assignment of all
17 right, title, and interest in the D450 patent. A true and correct copy of the D450
18 patent is attached hereto as Exhibit A.

19 11. On June 1, 2010, the United States Patent and Trademark Office
20 duly and lawfully issued United States Design Patent No. D616,919 (“the D919
21 patent”), entitled “Eyeglass Front.” Oakley is the owner by assignment of all
22 right, title, and interest in the D919 patent. A true and correct copy of the D919
23 patent is attached hereto as Exhibit B.

24 12. On March 23, 2004, the United States Patent and Trademark Office
25 duly and lawfully issued United States Letters Patent No. 6,708,340 (“the ‘340
26 patent”), entitled “Apparatus and Method Relating to a Quick Attachment and
27 Release Goggle Mounting System.” ESS is the owner by assignment of all
28 right, title and interest in the ‘340 patent. A true and correct copy of the ‘340

1 patent is attached hereto as Exhibit C.

2 **IV. CLAIM FOR RELIEF**

3 (Patent Infringement)
4 (35 U.S.C. § 271)

5 13. Plaintiffs repeat and re-allege the allegations of paragraphs 1-12 of
6 this complaint as if set forth fully herein.

7 14. Defendant, through its agents, employees and servants, has, and
8 continues to, knowingly, intentionally and willfully directly infringe, engage in
9 acts of contributory infringement, and/or induce the infringement of the D450
10 patent by directly and/or indirectly making, using, selling, offering for sale
11 and/or importing products which are covered by the claim of the D450 patent,
12 including at least Defendant's *Chemist* product.

13 15. Defendant's actions constitute infringement of the D450 patent
14 pursuant to 35 U.S.C. § 271. Defendant's acts of infringement of the D450
15 patent were undertaken without permission or license from Oakley. Defendant
16 had actual and/or constructive knowledge of the D450 patent and its actions
17 constitute willful and intentional infringement of the D450 patent.

18 16. Defendant, through its agents, employees and servants, has, and
19 continues to, knowingly, intentionally and willfully directly infringe, engage in
20 acts of contributory infringement, and/or induce the infringement of the D919
21 patent by directly and/or indirectly making, using, selling, offering for sale
22 and/or importing products which are covered by the claim of the D919 patent,
23 including at least Defendant's *Lockwood* product.

24 17. Defendant's actions constitute infringement of the D919 patent
25 pursuant to 35 U.S.C. § 271. Defendant's acts of infringement of the D919
26 patent were undertaken without permission or license from Oakley. Defendant
27 had actual and/or constructive knowledge of the D919 patent and its actions
28 constitute willful and intentional infringement of the D919 patent.

1 18. Defendant, through its agents, employees and servants, has, and
2 continues to, knowingly, intentionally and willfully directly infringe, engage in
3 acts of contributory infringement, and/or induce the infringement of the '340
4 patent by directly and/or indirectly making, using, selling, offering for sale
5 and/or importing products which are covered by one or more claims of the '340
6 patent, including at least Defendant's *OTW Quick Strap* product.

7 19. Defendant's actions constitute infringement of the '340 patent
8 pursuant to 35 U.S.C. § 271. Defendant's acts of infringement of the '340
9 patent were undertaken without permission or license from ESS. Defendant had
10 actual and/or constructive knowledge of the '340 patent and its actions
11 constitute willful and intentional infringement of the '340 patent.

12 20. Plaintiffs are informed and believe, and thereon allege, that
13 Defendant has derived and received, and will continue to derive and receive,
14 gains, profits and advantages from the aforesaid acts of infringement in an
15 amount that is not presently known to Plaintiffs. By reason of the aforesaid
16 infringing acts, Plaintiffs have been damaged and are entitled to monetary relief
17 in an amount to be determined at trial.

18 21. Due to the aforesaid infringing acts, Plaintiffs have suffered and
19 continue to suffer great and irreparable injury, for which Plaintiffs have no
20 adequate remedy at law.

21 **WHEREFORE**, Plaintiffs pray for judgment in their favor against
22 Defendant for the following relief:

23 A. A preliminary and permanent injunction enjoining Defendant, its
24 respective officers, directors, agents, servants, employees and attorneys, and
25 those persons in active concert or participation with Defendant, from directly or
26 indirectly infringing the D450 patent in violation of 35 U.S.C. § 271;

27 B. That Defendant account for all gains, profits, and advantages
28 derived by Defendant's infringement of the D450 patent in violation of

1 35 U.S.C. § 271, and that Defendant pay to Oakley all damages suffered by
2 Oakley and/or Defendant's total profit from such infringement;

3 C. An Order adjudging Defendant to have willfully infringed the
4 D450 patent under 35 U.S.C. § 271;

5 D. A preliminary and permanent injunction enjoining Defendant, its
6 respective officers, directors, agents, servants, employees and attorneys, and
7 those persons in active concert or participation with Defendant, from directly or
8 indirectly infringing the D919 patent in violation of 35 U.S.C. § 271;

9 E. That Defendant account for all gains, profits, and advantages
10 derived by Defendant's infringement of the D919 patent in violation of
11 35 U.S.C. § 271, and that Defendant pay to Oakley all damages suffered by
12 Oakley and/or Defendant's total profit from such infringement;

13 F. An Order adjudging Defendant to have willfully infringed the
14 D919 patent under 35 U.S.C. § 271;

15 G. A preliminary and permanent injunction enjoining Defendant, its
16 respective officers, directors, agents, servants, employees and attorneys, and
17 those persons in active concert or participation with Defendant, from directly or
18 indirectly infringing the '340 patent in violation of 35 U.S.C. § 271;

19 H. That Defendant account for all gains, profits, and advantages
20 derived by Defendant's infringement of the '340 patent in violation of
21 35 U.S.C. § 271, and that Defendant pay to ESS all damages suffered by ESS
22 from such infringement;

23 I. An Order adjudging Defendant to have willfully infringed the '340
24 patent under 35 U.S.C. § 271;

25 J. An Order for a trebling of damages and/or exemplary damages
26 because of Defendant's willful conduct pursuant to 35 U.S.C. § 284;

27 K. An Order adjudging that this is an exceptional case;
28

1 L. An award to Plaintiffs of the attorneys' fees and costs incurred by
2 Plaintiffs in connection with this action pursuant to 35 U.S.C. § 285;

3 M. An award of pre-judgment and post-judgment interest and costs of
4 this action against Defendant;

5 N. That Plaintiffs have and recover the costs of this civil action,
6 including reasonable attorneys' fees.

7 O. An award of pre-judgment and post-judgment interest and costs of
8 this action against Defendant;

9 P. Such other and further relief as this Court may deem just and
10 proper.

11 Respectfully submitted,

12 KNOBBE, MARTENS, OLSON & BEAR, LLP
13

14 Dated: _____

By: _____

15 Michael K. Friedland

16 Paul N. Conover

17 Ali S. Razai

18 Nicole A. Rossi

19 Attorneys for Plaintiffs Oakley, Inc. and Eye
20 Safety Systems, Inc.
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DEMAND FOR JURY TRIAL

Plaintiffs Oakley, Inc. and Eye Safety Systems, Inc. hereby demand a trial by jury on all issues so triable.

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: _____

By: _____

Michael K. Friedland

Paul N. Conover

Ali S. Razai

Nicole A. Rossi

Attorneys for Plaintiffs Oakley, Inc. and Eye Safety Systems, Inc.

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020112

EXHIBIT A



US00D581450S

(12) **United States Design Patent**
Moritz

(10) **Patent No.:** **US D581,450 S**

(45) **Date of Patent:** **** Nov. 25, 2008**

(54) **EYEGLASS**

(75) **Inventor:** **Hans Karsten Moritz**, Foothill Ranch,
CA (US)

(73) **Assignee:** **Oakley, Inc.**, Foothill Ranch, CA (US)

(**) **Term:** **14 Years**

(21) **Appl. No.:** **29/307,362**

(22) **Filed:** **Apr. 15, 2008**

(51) **LOC (8) Cl.** **16-06**

(52) **U.S. Cl.** **D16/326**

(58) **Field of Classification Search** D16/101,
D16/300-342; D29/109-110; D24/110.2;
351/41, 44, 51-52, 62, 158, 92, 103-123,
351/140, 153; 2/426-432, 447-449, 441,
2/434-437; D21/483, 659-661

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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D146,224 S *	1/1947	Kono	D16/326
2,482,195 A *	9/1949	Martin	351/52
D155,580 S *	10/1949	Coen	D16/326
D173,868 S *	1/1955	Belgard	D16/326
D187,299 S	2/1960	Behr	
D204,956 S *	5/1966	Ramp	D16/326
D208,437 S *	8/1967	Kono	D16/326
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D397,350 S *	8/1998	Jannard et al.	D16/326
D409,222 S	5/1999	Raub	
D427,622 S *	7/2000	Conway	D16/326

OTHER PUBLICATIONS

Oakley, Inc., Frogskin Sunglass model, Sample printed from www.oakley.com on Jun. 18, 2008, first published in approximately 1985.
U.S. Appl. No. 29/253,705, filed Feb. 10, 2006.
U.S. Appl. No. 29/285,424, filed Mar. 29, 2007.
U.S. Appl. No. 29/294,673, filed Jan. 21, 2008.
U.S. Appl. No. 29/294,656, filed Jan. 21, 2008.

* cited by examiner

Primary Examiner—Raphael Barkai

(74) *Attorney, Agent, or Firm*—Gregory K. Nelson

(57) **CLAIM**

The ornamental design for an eyeglass, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of the eyeglass of the present invention;

FIG. 2 is a front elevational view thereof;

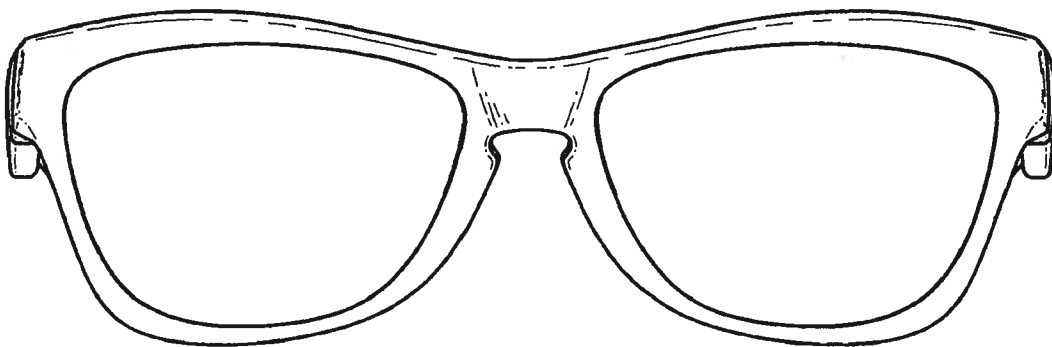
FIG. 3 is a rear elevational view thereof;

FIG. 4 is a left-side elevational view thereof, the right-side elevational view being a mirror image thereof;

FIG. 5 is a top plan view thereof; and,

FIG. 6 is a bottom plan view thereof.

1 Claim, 4 Drawing Sheets



U.S. Patent

Nov. 25, 2008

Sheet 1 of 4

US D581,450 S

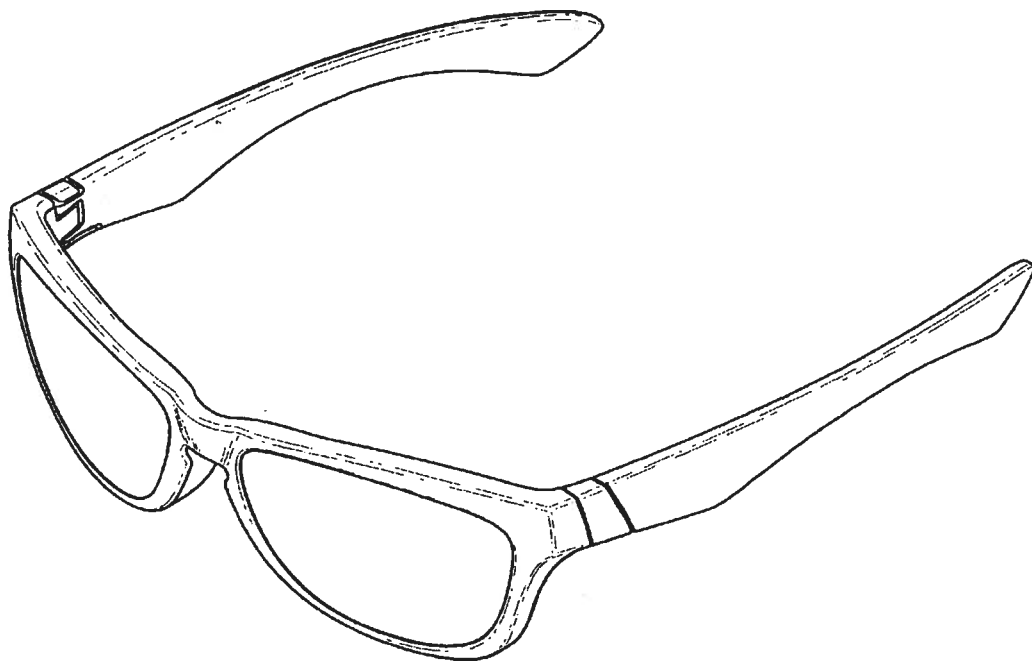


FIG. 1

U.S. Patent

Nov. 25, 2008

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US D581,450 S

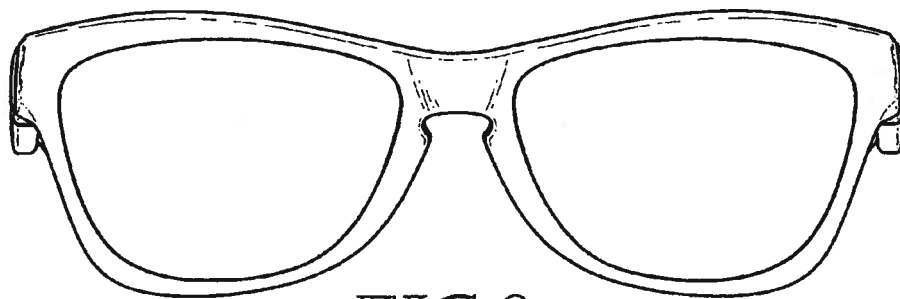


FIG. 2

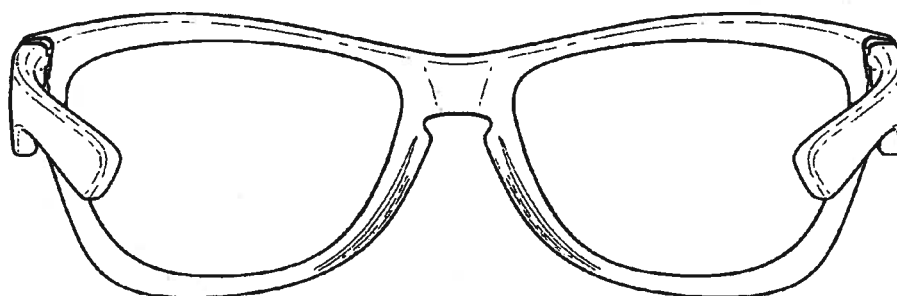


FIG. 3

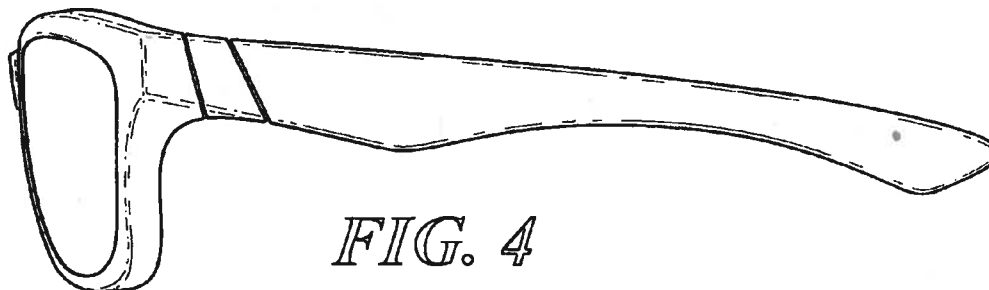


FIG. 4

U.S. Patent

Nov. 25, 2008

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US D581,450 S

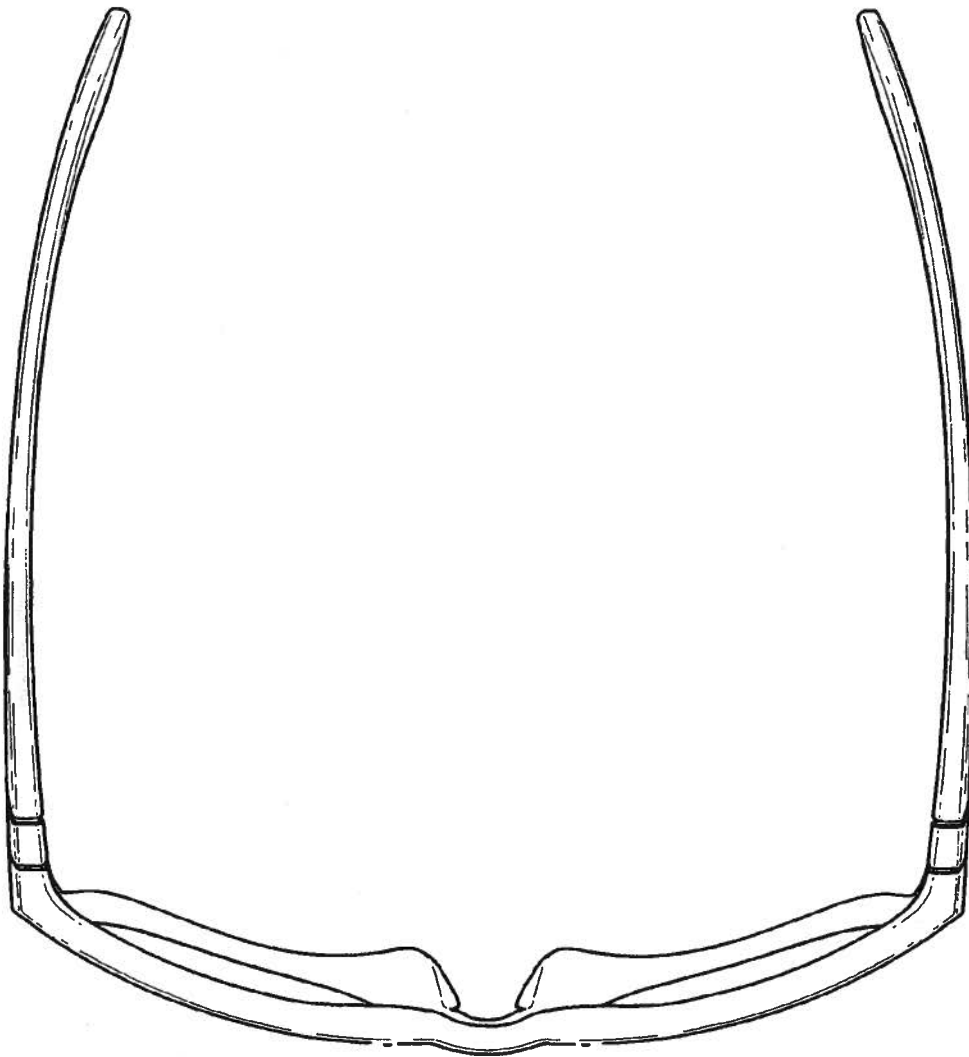


FIG. 5

U.S. Patent

Nov. 25, 2008

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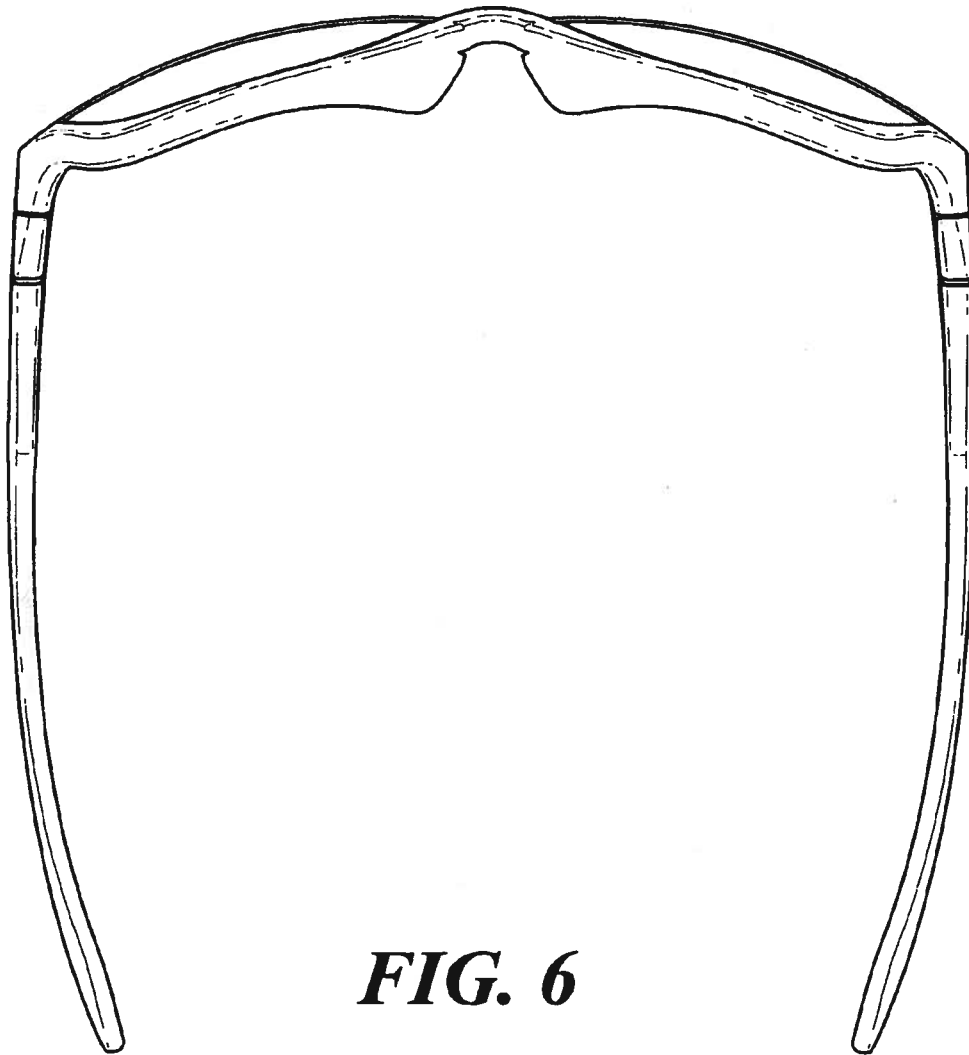


FIG. 6

EXHIBIT B



US00D616919S

(12) **United States Design Patent**
Thixton

(10) **Patent No.:** **US D616,919 S**
(45) **Date of Patent:** **** Jun. 1, 2010**

(54) **EYEGLASS FRONT**

(75) **Inventor:** **Lek Thixton**, Eastsound, WA (US)

(73) **Assignee:** **Oakley, Inc.**, Foothill Ranch, CA (US)

(**) **Term:** **14 Years**

(21) **Appl. No.:** **29/348,087**

(22) **Filed:** **Nov. 25, 2009**

Related U.S. Application Data

(62) Division of application No. 29/315,956, filed on Aug. 10, 2009, now Pat. No. Des. 610,604.

(51) **LOC (9) Cl.** **16-06**

(52) **U.S. Cl.** **D16/326**

(58) **Field of Classification Search** D16/101,
D16/300-342; D29/109-110; D24/110.2;
351/41, 44, 51-52, 62, 158, 92, 103-123,
351/140, 153, 45-46; 2/426-432, 447-449,
2/441, 436, 434-437, 13, 15; D21/483, 659-661
See application file for complete search history.

(56) **References Cited**

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D390,589 S	2/1998	Simioni
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D558,816 S	1/2008	Yee	
D561,810 S	2/2008	Fox et al.	
D575,323 S *	8/2008	Jannard et al.	D16/326
D604,759 S *	11/2009	Rohrbach et al.	D16/326

* cited by examiner

Primary Examiner—Raphael Barkai

(74) *Attorney, Agent, or Firm*—Gregory K. Nelson

(57) **CLAIM**

The ornamental design for an eyeglass front, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of the eyeglass front of the present invention;

FIG. 2 is a front elevational view thereof;

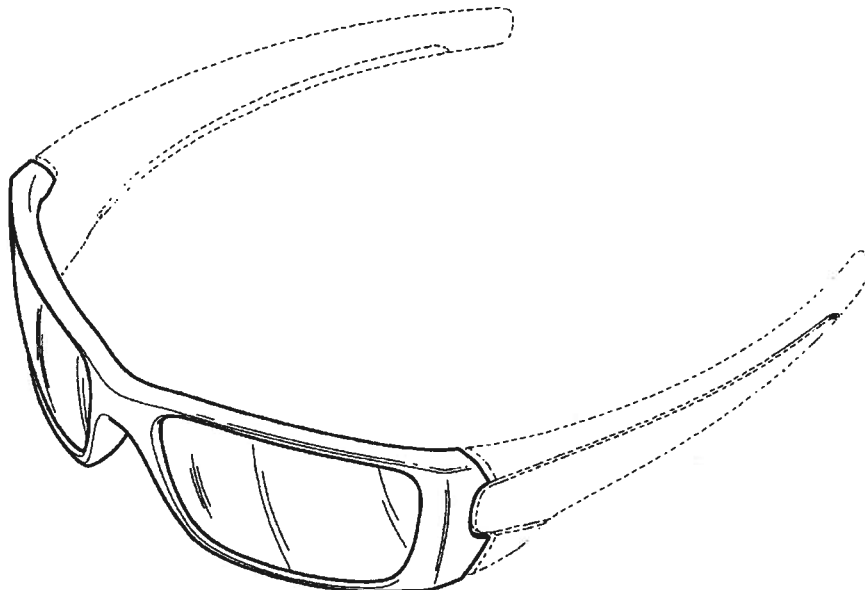
FIG. 3 is a rear elevational view thereof;

FIG. 4 is a left-side elevational view thereof, the right-side elevational view being a mirror image thereof;

FIG. 5 is a top plan view thereof; and,

FIG. 6 is a bottom elevational view thereof.

1 Claim, 3 Drawing Sheets



U.S. Patent

Jun. 1, 2010

Sheet 1 of 3

US D616,919 S

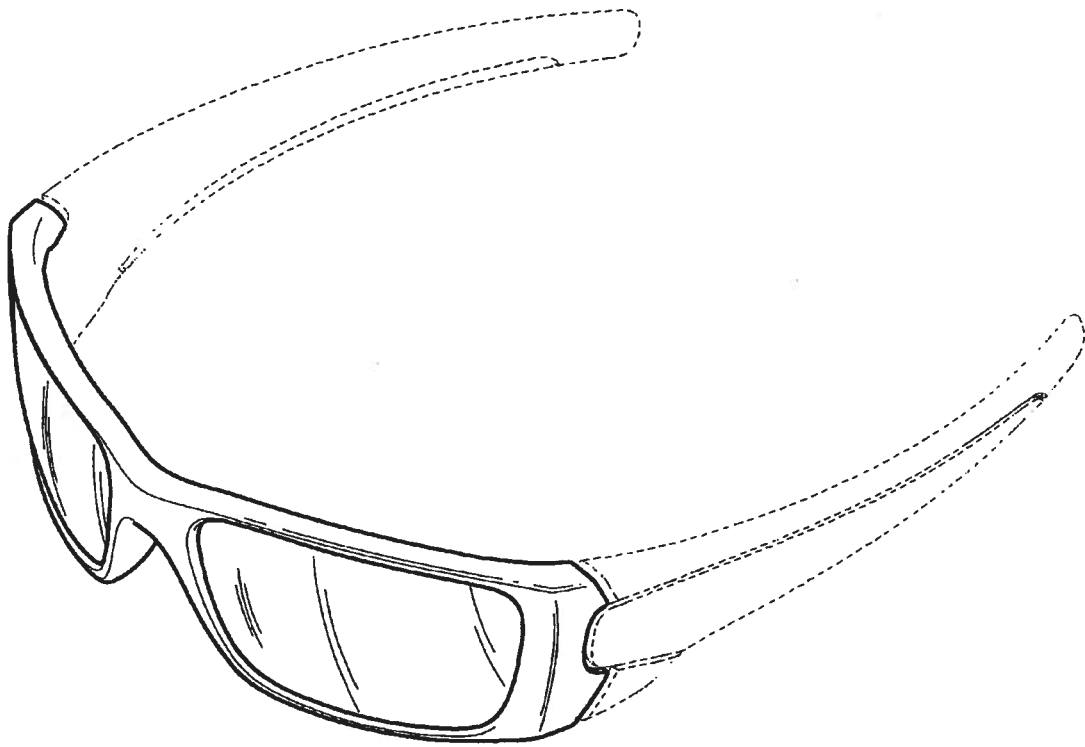


FIG. 1

U.S. Patent

Jun. 1, 2010

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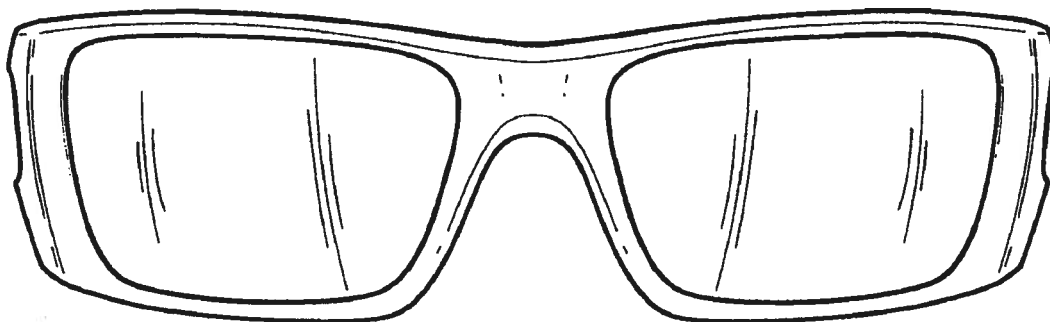


FIG. 2

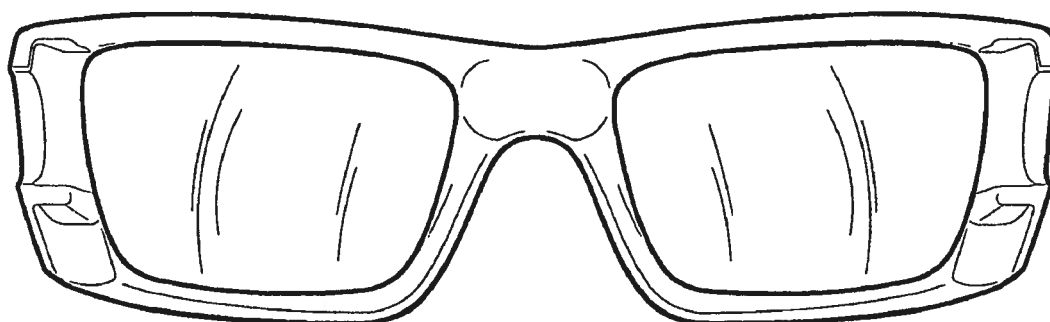


FIG. 3

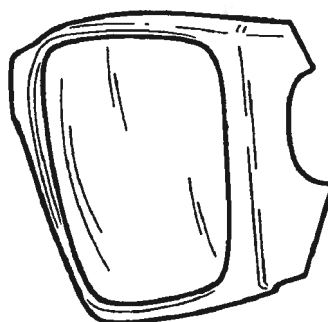


FIG. 4

U.S. Patent

Jun. 1, 2010

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US D616,919 S

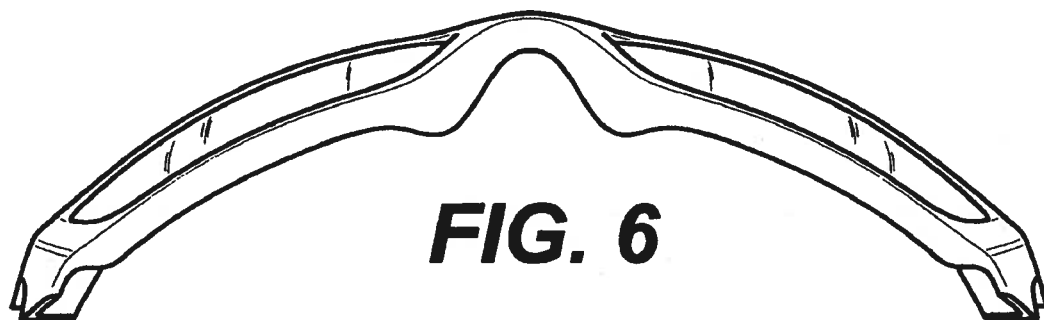
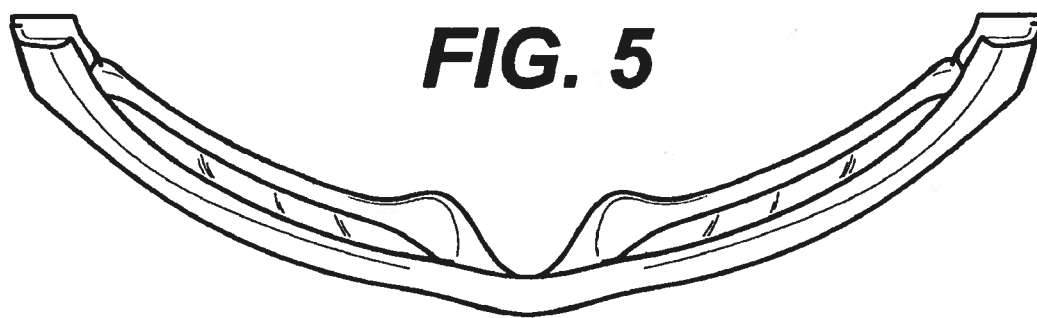


EXHIBIT C



US006708340B1

(12) **United States Patent**
Dondero

(10) **Patent No.:** **US 6,708,340 B1**
(45) **Date of Patent:** ***Mar. 23, 2004**

(54) **APPARATUS AND METHOD RELATING TO
A QUICK ATTACHMENT AND RELEASE
GOGGLE MOUNTING SYSTEM**

(75) **Inventor:** **John Dondero, Ketchum, ID (US)**

(73) **Assignee:** **Eye Safety Systems, Inc., Sun Valley,
ID (US)**

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 271 days.

This patent is subject to a terminal dis-
claimer.

(21) **Appl. No.:** **09/715,245**

(22) **Filed:** **Nov. 17, 2000**

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/668,527, filed on
Sep. 21, 2000, now Pat. No. 6,490,729.

(51) **Int. Cl.⁷** **A61F 9/00**

(52) **U.S. Cl.** **2/10; 2/63**

(58) **Field of Search** **2/5, 422, 10, 6.2,
2/6.3, 425; 128/201.24**

(56) **References Cited**

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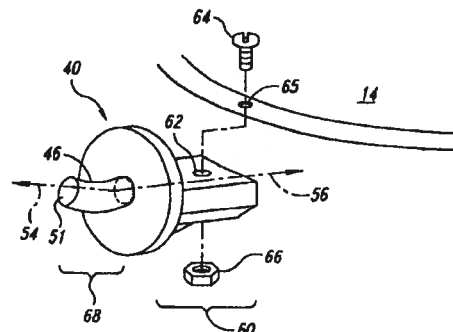
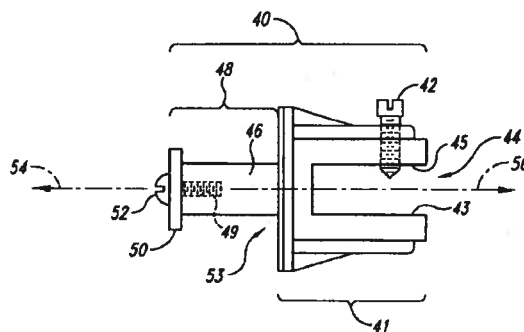
Primary Examiner—Katherine Moran

(74) *Attorney, Agent, or Firm*—Graybeal Jackson Haley
LLP

(57) **ABSTRACT**

System and methods for mounting a goggle to a helmet. The systems comprising a retaining post. The retaining post has a distal portion that has a portion with a greater cross section than the remainder of the retaining post. The retaining post may be fastened to a helmet brim by a screw type fastener. The portion having a greater cross section may be a resilient serrated washer secured to an end of the retaining post. The system further comprises a strap is provided with a first end that is attachable to a goggle and a second end with an opening therein. The opening is sized to pass interferingly over the greater cross section portion of the distal portion of the retaining post.

25 Claims, 3 Drawing Sheets



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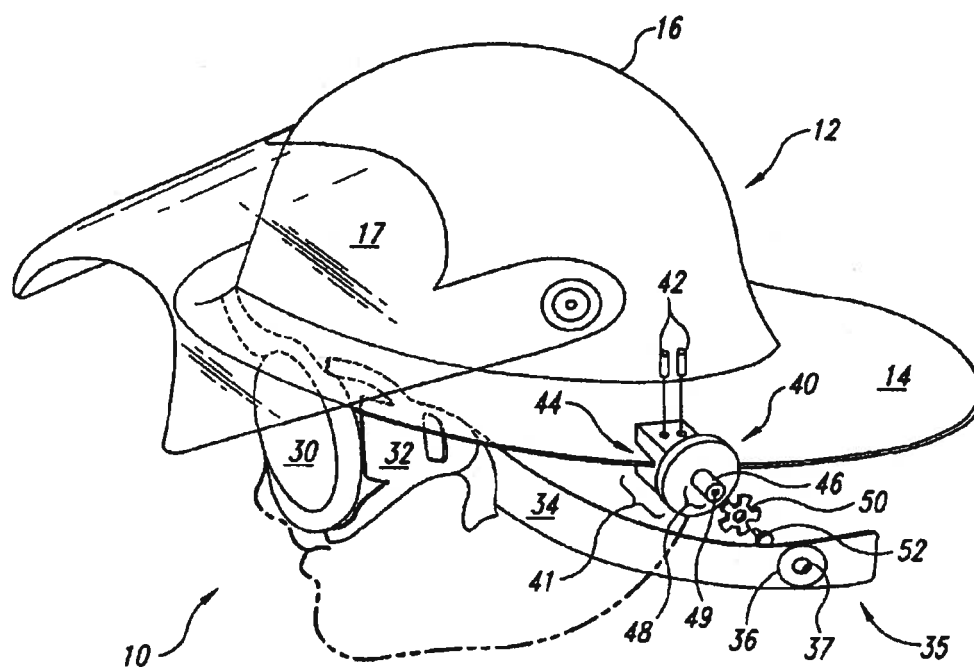


Fig. 1A

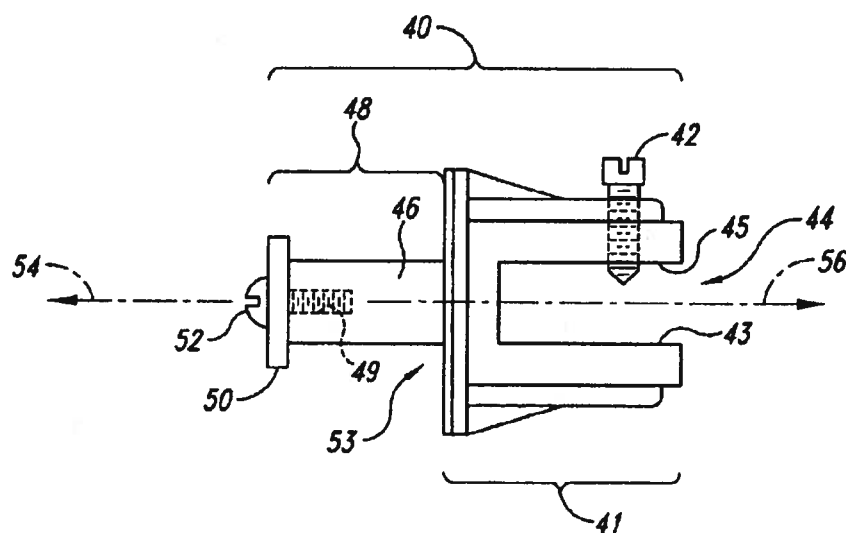


Fig. 1B

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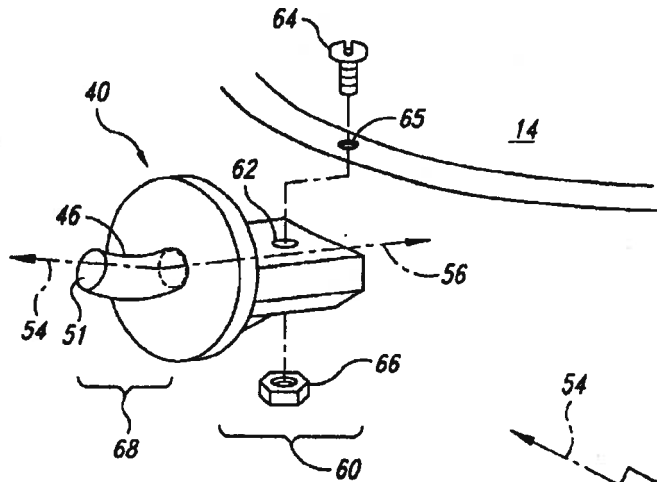


Fig. 2A

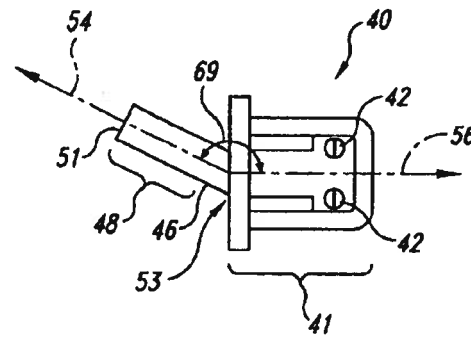


Fig. 2B

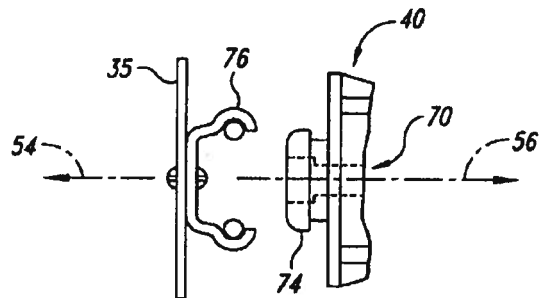


Fig. 3

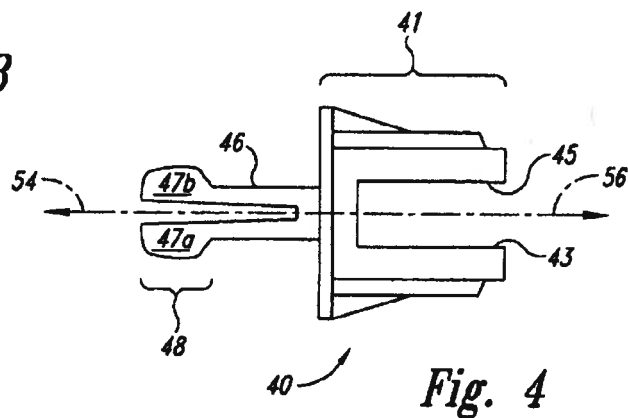


Fig. 4

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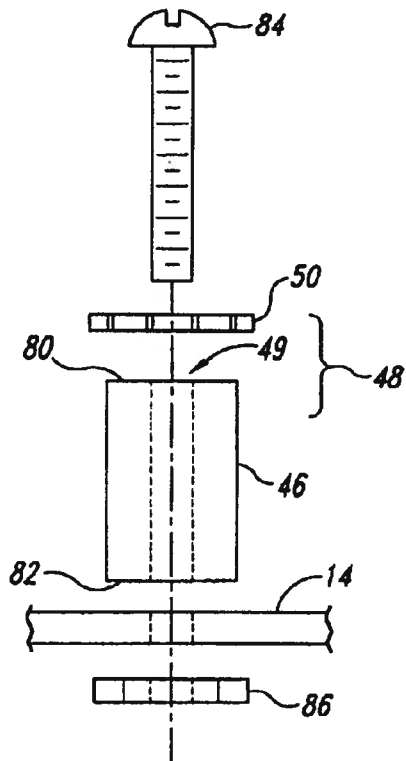


Fig. 5A

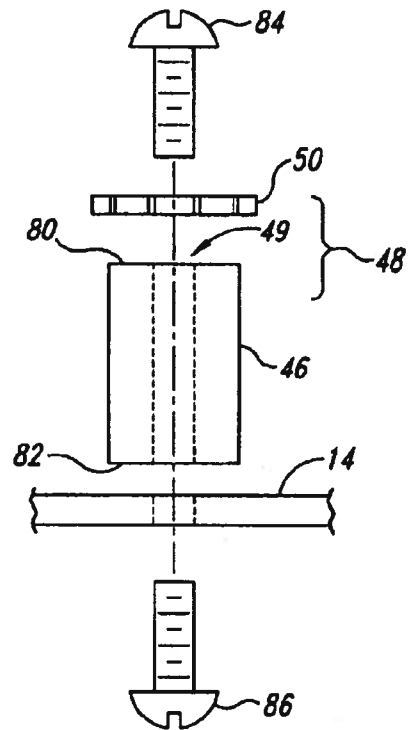


Fig. 5B

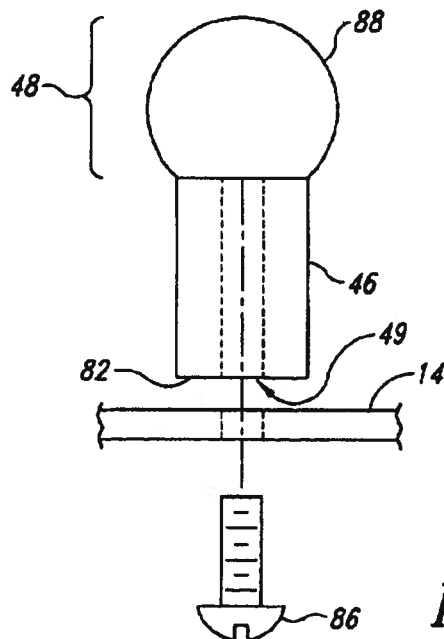


Fig. 5C

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APPARATUS AND METHOD RELATING TO A QUICK ATTACHMENT AND RELEASE GOGGLE MOUNTING SYSTEM

RELATION TO PREVIOUS APPLICATION

This application is a continuation-in-part of application Ser No. 09/668,527 filed on Sep. 21, 2000, now U.S. Pat. No. 6,490,729.

TECHNICAL FIELD

The present invention relates to quickly attaching a goggle to and releasing a goggle from a helmet.

BACKGROUND

Goggles have been available in the market place for many years. Goggles can be attached to a user's headwear such as a fireman's or construction worker's helmet. Other goggles are used by sports enthusiasts such as motorcycle riders, pilots, skydivers and skiers.

For some uses, such as a prolonged activity like skiing, a goggle can be attached to and detached from the helmet at the leisure of the user. Since the user knows when a particular activity will begin, and knows that he or she will most likely wear the goggles throughout the duration of the event or activity, the need for a quickly attachable and releasable goggle is minimal.

For other uses, such as fighting fires, there is a need to quickly attach and release the goggles, often when the user is busy doing something else and has only one hand free. Some previous mounting systems have required two hands to join two mating parts together. Some other systems require the dexterity of an un-gloved hand to attach or release the goggle from the helmet. In emergency scenarios, removing one's gloves can be a waste of precious time, or dangerous if in the vicinity of sharp or burning objects. Also, a goggle is often desired as eye protection by fire fighters and rescue personnel because a face shield alone does not provide the level of eye protection required in an environment filled with smoke or airborne debris.

Therefore, there is a need for a goggle mounting system that permits quick attachment to and release of a goggle from the helmet with one hand and while wearing gloves.

SUMMARY OF THE INVENTION

The present invention provides system, and methods for quickly attaching a goggle to a helmet and releasing the goggle from the helmet. Such systems and methods are desirable in activities of uncertain duration or which may involve abrupt changes in the type of activity or physical environment, such as fire fighting and emergency rescue. The present invention is simple to use, can be used with a helmet having a face shield, and can be readily used by someone wearing gloves. It also permits quick and simple assembly during manufacture of the helmet or field retrofit.

In one aspect of the invention a goggle mounting system is provided comprising a retaining post that is mounted directly to a section of helmet, such as the brim. The retaining post has a portion that is of a greater cross section that the remainder of the post. A strap that is attachable to a goggle at one end has an opening in the other end, such as a grommet. The grommet is sized to pass interferingly over the greater cross section portion of the retaining post. The greater cross section portion may be a resilient member, such as a serrated plastic washer, that deforms upon passage of the grommet over it, or conversely, in an alternative

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embodiment, the greater cross section portion may be comprised of a relatively inflexible material, such as a plastic bead, and the grommet would be comprised of a resilient material so that it can deform, or stretch, upon passage over it. The post is mounted to the helmet by a variety of well known fasteners.

A particular embodiment of the invention comprises a substantially cylindrical retaining post with a substantially axial hole through it. A resilient washer, such as a serrated washer, is mounted to one end of the retaining post by a fastener. The same fastener may be used to secure the retaining post to the helmet, or a second fastener may be used to secure the retaining post.

Another aspect of the invention is the combination of the retaining post and strap described above, and a goggle. A further embodiment includes a helmet.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is an view of the goggle mounting system in use on a firefighter's helmet, which shows in part an exploded view of a bracket body.

FIG. 1B is a side view of the bracket body depicted in FIG. 1A.

FIG. 2A is a perspective view of an alternative embodiment of the bracket body depicting a curved retaining post and a mounting stud.

FIG. 2B is a top view of the bracket body depicted in FIG. 2A.

FIG. 3 is a side view of another alternative embodiment of the bracket body depicting a bracket body with a snap member thereon, the bracket body being adaptable to flush mount to the side of a helmet without a brim.

FIG. 4 is perspective view of another embodiment of the bracket body depicting a slotted retaining post with flexible fingers.

FIG. 5A is an exploded side view of another embodiment of a retaining post shown mounted directly to a section of a helmet.

FIG. 5B is a an exploded side view of the retaining post of FIG. 5a employing an alternative mounting method.

FIG. 5C is an exploded side view of the retaining post showing an alternative structure for aiding in retaining a goggle strap thereon.

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides a system and method for quickly attaching a goggle to a helmet and removing a goggle from the helmet. The invention will be described principally as it applies to a type of helmet commonly worn by fire fighters and emergency rescue personnel. However, it is useable on a wide variety of helmets, preferably with a brim, but as will be discussed below, the system is adaptable to brim-less helmets as well. The invention is advantageous because it permits a user to easily and quickly secure his or her goggles to the helmet and to easily and quickly detach the goggles from the helmet, even if the user is wearing gloves or if the helmet has a face shield.

Referring to FIGS. 1A and 1B, FIG. 1A shows one embodiment of the present invention in use with a fireman's helmet, while FIG. 1B shows a side view of the bracket body of this embodiment shown in FIG. 1A. In FIG. 1A, a fire fighter 10 is shown wearing a helmet 12. The helmet has a brim 14 surrounding the crown 16. Mounted to the crown 16

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is a face shield 17 which can be pivoted downward as desired. The fire fighter 10 is wearing a goggle 30 attached to a strap 34. The strap has a first strap end 32 that is adapted for attachment to the goggle 30. The second strap end 35 includes a grommet 36 with an opening 37. The strap 34 is attached to a bracket body 40 by passing the grommet 36 over a resilient washer 50 onto a retaining post 46. The sizes of the opening 37 and the resilient washer 50 are chosen so that there is relative interfering passage of the two elements when the goggle is attached or released.

A bracket body 40 is shown mounted to helmet brim 14. The bracket body 40 is the entire structure that is mounted to the helmet and to which the strap 34 is attached. The bracket body 40 includes a retaining post 46 which extends in a first direction 54. The first direction 54 generally points away from the helmet when the bracket body 40 is installed on the helmet brim 14. The retaining post 46 has a distal portion 48 with a hole 49 therein. By definition, the distal portion includes a portion of the retaining post 46 displaced from the base end 53 of the retaining post 46 where its base end 53 joins a mounting bracket 41. A resilient serrated washer 50 is fastened to the retaining post 46 by screw 52. The mounting bracket 41, which extends in a second direction 56, generally points towards the helmet. The mounting bracket 41 has a slot 44 establishing a first slot wall 45 and a second slot wall 43. The slot 44 receives a portion of the helmet brim 14 between the slot walls 45 and 43 and is secured to the brim by tightening set screws 42 which pass through the mounting bracket 41 and the first slot wall 45. The tightening of the set screws 42 essentially clamps the brim 14 between the set screws 42 and the second slot wall 43. An identical bracket body can be attached to the brim 14 on the other side of the helmet 12, but is not shown in this view. The bracket body 40 can be constructed of a molded plastic material. Other materials and forming methods are useful to form such a bracket such as metal machining or casting.

When a fire fighter needs to use the goggle, he simply pushes the grommet opening 37 over the resilient serrated washer 50. The grommet opening 37 and the washer 50 are sized to permit interfering passage of the washer 50 and the grommet 36. "Interfering passage" refers to the relative displacement of the washer 50 and the grommet 36, wherein the largest cross section dimension of the washer 50 is smaller than the opening 37 in the grommet 36. The dimensional differences causes there to be interference between the washer 50 and the grommet 36. However, the inherent resiliency of the washer 50 allows it to deform sufficiently to permit passage of the grommet 36.

The primary tension in the strap 34 is approximately perpendicular to the axis of the post, so it is not necessary for the strap to be fixed in place by some other means that may require greater effort, dexterity, or two hands to attach the strap 34 to the bracket body 40. When the fire fighter is ready to remove the goggle, he simply grasps the strap 34 near the grommet 36 and pulls generally outwardly or away from the brim 14; essentially in the same direction as first direction 54. There is no need for any substantial displacement of the grommet 36 perpendicular to the first direction 54. Therefore, the strap 34 can be attached or removed in a single smooth motion.

The bracket body 40 can be attached to the helmet 12 at any place along the brim 14 that suits the wearer of the helmet by simply tightening the set screws 42. As long as the retaining post 46 generally points sideways away from the helmet or somewhat rearwardly and/or upwardly the system will retain the goggle until the wearer pulls the grommet 34

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off the post 46. If the bracket body 40 were mounted so that the retaining post 46 pointed somewhat towards the front of the helmet, the interference of the grommet 36 and the resilient washer 50 will still hold the grommet 36 in place unless the tension in the strap is high enough to overcome the resistance presented by the interfering fit of the grommet 36 and the resilient washer 50.

The resilient washer 50 does not need to be a washer of the serrated type shown. The resilient washer 50 may be replaced by any resilient member or device that, when incorporated as part of the bracket body, either by unitary formation or later attachment, serves the function of permitting interfering passage of the grommet 36. The resilient member may be a protrusion formed as part of the post or attached to it as by the screw 52, glue, or other method of attachment. The resilient washer, or other resilient member, establishes a portion of the retaining post 46 having a greater cross section than the remainder of the retaining post 46. This greater cross section portion, which in the case of this embodiment is resilient washer 50, need not be at the very end of retaining post 46 as shown in FIG. 1B. It could be anywhere along the length of the distal portion 48 sufficient to allow passage of the grommet 36 past it and still permit the grommet to seat along the remainder of the retaining post 46 where the cross section is approximately equal to or smaller than the size of the opening 37.

The greater cross section portion of the retaining post 46 can also be a non-resilient material or device, and the grommet of a resilient material, wherein the sizing of the respective elements still permits interfering relative passage. For example, the greater cross section portion may simply be a sphere-like shape molded on the end of the retaining post 46. The grommet can be comprised of a resilient material, such as plastic, that will stretch or deform enough to pass over the bead. In another variation, both the grommet and the greater cross section portion may be comprised of relatively resilient material so that both elements deform upon passage of the grommet over the distal portion of the retaining post. Additionally, the grommet may be replaced by a shape or device having sufficient resiliency or flexibility to deform when forced over the distal portion 48 of the retaining post 46. An alternative to the grommet shown can be as simple as a reinforced hole, much like a button hole, sewn into the second strap end 35, or a planar plastic tab mounted at the second strap end 35 that has a slit or other passage through it that will permit relative interfering passage of the greater cross section portion of the retaining post 46. In yet another variation, a hook-like structure can be mounted at the second strap 35 end that will pass around the retaining post, but is sized to not permit it to slide past the part of the retaining post including the greater cross section, namely, the distal portion. Another device that can serve the same function as a hook, is a hoop-like fastener of the type commonly use on the straps of a workman's coveralls to hook onto a button at the front of the coveralls.

Referring to FIG. 2A, an alternative embodiment of the bracket body 40 is depicted. In this embodiment, the bracket body 40 does not have a mounting bracket 41 or a slot 44 as described previously. Instead, it has a mounting stud 60 with a hole 62 through it. This configuration of bracket body 40 can be mounted to a brim by passing a fastener, such as screw 64, through an appropriately sized hole 65 in the helmet brim 14 and hole 62, then tightening nut 66 to secure the assembly. In this embodiment, as shown in FIG. 2A, the retaining post 46 can be bent or curved along a portion of its axial length 68 in a manner so that when it is attached to the brim 14, the retaining post 46 curves generally rearwardly

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and/or upwardly. The length of the curved portion of the retaining post 46 can vary, and it may incorporate the full length of the retaining post 46. The net effect of curving the post is to re-define the first direction 54. As indicated in FIG. 2B, the first direction 54 originates at the base 53 of the retaining post 46 and runs out through the extreme distal end 51 of the retaining post 46. Accordingly, an angle 69 is formed between the first direction 54 and the second direction 56. In this approach, having a resilient member, such as washer 50, is not necessary. The grommet opening 37 can be sized to freely pass over the distal portion 48. The strap 34 will tend to stay in place when the grommet 36 (not shown) is placed on the post, because of the tension in the strap 34, until removed by an outward force, with a nominal rearward and/or upward component, applied to the strap 34 to remove the grommet 36 from the curved retaining post 46.

As shown in FIG. 2B, an alternative to curving the retaining post is to simply set the retaining post 46 at an angle 69 that is substantially less than 180 degrees relative to the mounting bracket 41 as defined by the first direction 54, and the second direction 56, such that the retaining post 46 is disposed generally rearwards and/or upwardly (i.e., away from the direction of the tension force imparted by strap 34). (Also, note that the bracket body 40 shown in FIG. 2B includes mounting bracket 41 instead of mounting stud 60 shown in FIG. 2A. However, the two different structures for mounting the bracket body 40 to the helmet can be interchanged with the various retaining post configurations.) In this way the retaining post can achieve a generally rearward and/or upward angle and retain the strap in much the same manner as discussed previously in relation to the curved retaining post embodiment. Of course the angle between the first direction 54 and second direction 56 can be essentially equal to 180 degrees and the bracket body can be canted slightly during installation to achieve a somewhat rearward pointing retaining post to again retain the strap as just discussed. It should be noted that a single bracket body formed with an angle of less than 180 degrees between the first direction 54 and the second direction 56 would result in an asymmetrical installation unless a mirror image bracket body were formed. In other words, mirror image, or left and right hand, bracket bodies, might be used depending on the method of mounting to the helmet and any requirement that the installation be symmetrical. Likewise, depending on how the straps are adapted to attach to the goggle, there may be a requirement for mirror image straps.

Another alternative embodiment is shown in FIG. 3. This arrangement has the advantage of being mountable to a helmet without a brim. A hole 70 through the center of bracket body 40 is used for attachment to the helmet crown 16 (helmet not shown) by a fastener such as a screw, rivet or glue. The bracket body 40 does not include a mounting bracket 41 or a mounting stud 60 as described above. Instead of employing a retaining post and grommet configuration as described above, this embodiment utilizes a first snap member 74 and a second snap member 76. First snap member 74 extends in the first direction 54 and is either attached to the bracket body 40 or formed as an integral part of the bracket body 40. The mating second snap member 76 is attached to the second strap end 35. The mating snap members can be of a variety of well known devices for accomplishing this type of function. Other mounting methods such as using mounting bracket 41 or mounting stud 60 as discussed above and shown in FIGS. 1A and 2A would work in this embodiment for use on brimmed helmets.

Yet another embodiment is shown in FIG. 4. In this embodiment, the retaining post 46 is separated along a

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portion of its length substantially parallel to its axis. Two fingers 47a and 47b are thus formed. The distal portion 48 of the retaining post 46 is sized to interfere with passage of the grommet 36 (not shown) over the distal portion 48. The fingers 47a and 47b are designed to flex substantially towards each other to the extent necessary to allow passage of the grommet 36 over the distal portion 48. Other variations of this approach are possible that might include more than two fingers.

FIG. 5A depicts an embodiment comprising retaining post 46 and its associated structures wherein the retaining post 46 is directly mounted onto the helmet. The hole 49 passes through the retaining post 46 substantially in an axial direction from a first post end 80 to a second post end 82. The first fastener 84, such as a machine screw, is of a length sufficient to pass through the resilient member 50, such as a serrated washer comprised of a flexible material, through the retaining post 46, through a section of brim 14 where it is then engaged by a second fastener 86, such as a nut. The entire assembly is secured by tightening the fasteners 84 and 86.

FIG. 5B is a variation on the embodiment depicted in FIG. 5A. In this embodiment the first fastener 84 is used just to fasten resilient member 50 to first post end 80. The first fastener 84 is of a type that will frictionally engage the material of retaining post 46 surrounding hole 49, thus securing the resilient member 50 to the first post end 80. The second fastener 86 is used to secure the retaining post 46 to a section of the brim 14 by frictional engagement of the second fastener 86 with the material of the retaining post 46 surrounding hole 49 at a second post end 82. The fasteners 84 and 86 may be screws bearing threads designed to engage a softer material much like a wood screw is designed to frictionally engage wood. Such a choice of fasteners also allows for releasing the retaining post 46 from the brim 14 if replacement or repair is required. The fasteners could also be of a type that are not intended for removal, such as a bonded rivet. The resilient member 50 can be fastened to the first post end 80 by some other means, such as an adhesive, or it can be formed as an integral part of the retaining post 46 such as by a plastic molding process. Also, the hole 49 need not pass completely through the retaining post 46. Although not shown, there may be two or more holes passing substantially axially part way into the retaining post from the ends 80 and 82.

FIG. 5C depicts another embodiment wherein the retaining post 46 bears on the distal portion 48 a bead 88. The bead 88 may formed as an integral part of retaining post 46. Alternatively, the bead 88 could be a separate element with a hole passing through it and maybe secured in place by a fastener much like the resilient member 50 as described above in relation to FIG. 5A. In this embodiment the bead 88 may not necessarily be comprised of a resilient material. In such a configuration, the opening 37 in the strap 34 is designed to deform when passing over the bead 88. For instance, a grommet 36 may be selected from a material having flexible or deformable properties so it can stretch sufficiently to pass over the bead 88.

The method of use of the systems described above is quite simple. Once the user retrieves the goggles from a storage location, such as a coat pocket or a pouch on an equipment belt, the user simply grasps either of the two straps 34 at or near the strap end 35. The user then pushes the grommet 36, or equivalent opening, past the resilient washer 50, or its equivalent structures, into a seated position on the retaining post 46. The user then grasps the other strap 34, positions the goggles over their eyes and repeats the attachment step

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described above. The removal of the goggles is essentially the reverse of the previous discussion. Again, as described previously, some small amount of rearward and/or upward force may be required in addition to an outwardly directed removal force if the retaining post is pointed rearwardly and/or upwardly to some degree. Similar forces and motions may be required if the embodiments incorporating snap members, or other hook-like or hoop-like devices, or their equivalents, are employed as described above.

It will be apparent to those skilled in the art, that the systems and methods for retaining the strap upon the retaining post and bracket mounting approaches disclosed above may be combined to create embodiments not specifically described or shown in the drawings.

The terms set forth in this application are not to be interpreted in the claims as indicating a "means plus function" relationship unless the word "means" is specifically recited in a claim, and are to be interpreted in the claims as indicating a "means plus function" relationship where the word "means" is specifically recited in a claim. The term "having" in the claims is to be interpreted as meaning the claim may include additional elements that are not specifically recited in the claim.

It is to be understood that even though various embodiments and advantages of the present invention have been set forth in the foregoing description, the above disclosure is illustrative only, and changes may be made in detail, and yet remain within the broad principles of the invention. Therefore, the present invention is to be limited only by the appended claims.

I claim:

1. A goggle mounting system for quickly mounting a goggle to and releasing a goggle from a helmet, the system comprising:

a retaining post capable of being directly mounted to the helmet, the retaining post configured to releasably engage a goggle and further having a greater cross section portion at a distal portion of the retaining post; and

a strap having a first strap end able to attach to a goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over the greater cross section portion of the retaining post.

2. The goggle mounting system of claim 1, wherein the opening is resilient.

3. The goggle mounting system of claim 1, wherein the greater cross section portion of the retaining post comprises a resilient member attached to the retaining post.

4. The goggle mounting system of claim 3, wherein the resilient member is a serrated washer.

5. A goggle mounting system for quickly mounting a goggle to and releasing a goggle from a helmet, the system comprising:

a retaining post capable of being directly mounted to the helmet, the retaining post further having a greater cross section portion at a distal portion of the retaining post; and

a strap having a first strap end able to attach to a goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over the greater cross section portion of the retaining post, wherein the opening is a grommet.

6. The goggle mounting system of claim 5, wherein the retaining post is configured to releasably engage the goggle.

7. A goggle mounting system for quickly mounting a goggle to and releasing a goggle from a helmet, the system comprising:

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a retaining post capable of being directly mounted to the helmet, the retaining post further having a greater cross section portion at a distal portion of the retaining post; and

a strap having a first strap end able to attach to a goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over the greater cross section portion of the retaining post, wherein the opening is a grommet comprised of a resilient material.

8. The goggle mounting system of claim 7, wherein the retaining post is configured to releasably engage the goggle.

9. A goggle mounting system for quickly mounting a goggle to and releasing a goggle from a helmet, the system comprising:

a retaining post capable of being directly mounted to the helmet, the retaining post further having a greater cross section portion at a distal portion of the retaining post; and

a strap having a first strap end able to attach to a goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over the greater cross section portion of the retaining post, wherein the retaining post is releasable from the helmet.

10. The goggle mounting system of claim 9, wherein the retaining post is configured to releasably engage the goggle.

11. A goggle mounting system for quickly mounting a goggle to and releasing a goggle from a helmet, the system comprising:

a retaining post capable of being directly mounted to a helmet and having a resilient member mounted to a distal portion of the retaining post,

at least one fastener passing into the retaining post in a generally axial direction for mounting the retaining post to a helmet; and

a strap having a first strap end able to attach a goggle, and the strap having a second strap end having an opening therein, which is sized to pass interferingly over the resilient member.

12. The system of claim 11, wherein the resilient member is a washer.

13. The system of claim 12, wherein the washer is a serrated washer.

14. The system of claim 11, wherein the retaining post is configured to releasably engage the goggle.

15. A goggle system retaining post for attachment to a helmet, the retaining post comprising:

a retaining post having a first post end, a second post end and at least one substantially axial hole therethrough; a resilient member mounted to the first post end; and the retaining post being directly mountable to a helmet by a first fastener passing into the at least one substantially axial hole at the second post end and thereby engaging a section of a helmet between the second post end and the first fastener.

16. The retaining post of claim 15, wherein the first fastener is also used to mount the resilient member to the first post end by passing through the substantially axial hole and engaging a second fastener.

17. The retaining post of claim 15, wherein a second fastener is used to mount the resilient member to the first post end.

18. The retaining post of claim 15, wherein the resilient member is a resilient washer.

19. The resilient washer of claim 18, wherein the resilient washer is a serrated washer.

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20. The retaining post of claim 15, wherein the retaining post is substantially cylindrical.

21. The retaining post of claim 15, wherein the retaining post is configured to releasably engage the goggle.

22. A goggle system retaining post for attachment to a helmet, the retaining post comprising:

a substantially cylindrical retaining post having a first post end and a second post end,

a substantially axial hole passing through the substantially cylindrical retaining post from the first post end to the second post end,

a resilient serrated washer mounted to the first post end by a first fastener passing through the resilient serrated washer and the substantially axial hole, and

a second fastener being engagable with the first fastener for securing the retaining post to a helmet at the second post end.

23. The goggle system retaining post of claim 22, wherein the retaining post is configured to releasably engage the goggle.

24. A goggle and goggle mounting system for mounting the goggle to a helmet comprising:

a goggle;

a retaining post configured to releasably engage a goggle and having a first post end and a second post end;

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a resilient member mounted on the post body at the first post end;

the retaining post being directly mountable to a helmet at the second post end; and

a strap having a first strap end able to attach to the goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over the resilient member.

25. A helmet and goggle and goggle mounting system comprising:

a helmet;

a goggle;

a retaining post configured to releasably engage a goggle and having a first post end and a second post end;

a resilient member mounted on the post body at the first post end,

the retaining post being directly mountable to a helmet at the second post end; and

a strap having a first strap end able to attach to the goggle, and a second strap end having an opening therein, the opening being sized to pass interferingly over resilient member.

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