1 2 3 4 5	Gregory K. Nelson, CSB 203029 Email: gnelson@wknjlaw.com Chandler G. Weeks, CSB 245503 Email: chandlerw@wknjlaw.com WEEKS, KAUFMAN, NELSON & JOHN 462 Stevens Avenue, Suite 310 Solana Beach, CA 92075 Telephone: (858) 794-2140 Facsimile: (858) 794-2141 Email: Office@wknjlaw.com Attorneys for Plaintiff	NSON	2010 AUG 25 AM 11: 42	רבט				
8	UNITED STATES	DISTRICT COU	JRT .					
9	CENTRAL DISTRIC	CT OF CALIFOR	RNIA					
10	SOUTHER	N DIVISION						
11								
12	OAKLEY, INC., a Washington	Case No.: CVI	0-6340 DDP(AC	DV				
13	corporation,		DA) ICC	KA)				
14	Plaintiff,	) COMPLAINT	FOR PATENT					
15	vs.	COMPLAINT FOR PATENT INFRINGEMENT AND BREACH OF CONTRACT						
16	ZEAL OPTICS, INC., a Delaware	}						
17	corporation,	) — — — —	R JURY TRIA	L				
18	Defendants.	}	+AX					
19		.1						
20	Plaintiff, Oakley, Inc. (hereinafte	er referred to as	"Oakley") co	mplains of				
21	Defendant Zeal Optics, Inc. (hereinafte	er referred to as	("Zeal"), and	alleges as				
22	follows:							
23	JURISDIC'	TION AND VE	NUE					
25	1. Jurisdiction over this action	n is founded upo	on 28 U.S.C. §	§ 1331 and				
25	1338. Venue is proper in this forum und	der 28 U.S.C. §§	1391(a-d) and	28 U.S.C. §				
27	1400(b). The claim arose in this judicia	al district, and D	efendant is doi	ng business				
28	in this judicial district. Jurisdiction and	venue are further	proper based of	on the terms				
	of a settlement agreement between the p	arties.						
		l Complaint for Pa	itent Infringement and I	Breach of Contract				

I

#### THE PARTIES

- 2. Plaintiff Oakley, Inc. is a corporation organized and existing under the laws of the state of Washington having its principal place of business located at One Icon, Foothill Ranch, Orange County, California 92610.
- 3. Oakley is informed and believes, and thereupon alleges, that Defendant Zeal Optics, Inc. is a Delaware corporation having its principal place of business at 4843 Pearl Street 1A, Boulder, Colorado 80301. Oakley is informed and believes, and thereupon alleges, that Zeal is doing business within this judicial district, is marketing its products to companies in this judicial district, including the allegedly infringing products, and/or is putting products on sale in the stream of commerce knowing that such products will be sold by partners or distributors in this judicial district, as set forth more fully below.

### FACTUAL BACKGROUND

- 4. Oakley is a manufacturer and seller of high performance eyewear, electronic eyewear, and accessories. Oakley expanded its reputation as an innovator in the eyewear industry by introducing a whole new category of products—wearable electronics. With the introduction of its first product in this category, the world was introduced to MP3 sunglasses, which allow the wearer to listen to their tunes from uploaded MP3 on their sunglasses, without the hindrance of wires. Oakley then introduced Bluetooth® enabled eyewear, with its first offering being the *Razrwire* sunglass, and other Bluetooth® enabled eyewear such as the *O Rokr and O Rokr Pro* models.
- 5. Oakley is the owner by assignment of U.S. Patent No. 7,013,009 duly and lawfully issued on March 14, 2006, describing and claiming the invention of Peter Warren entitled "EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES" protecting Oakley's technology related to wireless communication eyewear embodied in its *Razrwire*, *O Rokr* and *O Rokr Pro* lines of sunglasses.

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The '009 patent was the subject of reexamination, which resulted in the successful reissue of the patented on September 29, 2009. A true and correct copy of U.S. Patent No. 7,013,009 is attached hereto as Exhibit 1 and incorporated herein by reference.

- 6. Defendant is presently marketing and selling sunglass models, specifically including but not limited to its Confidant Bluetooth enabled eyeglass, that embody the subject matter claimed in Oakley's U.S. Patent No. 7,013,009.
- Oakley is the owner by assignment of U.S. Patent No. 7,231,038 duly 7. and lawfully issued on June 12, 2007, describing and claiming the invention of Peter Warren entitled "EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES" protecting Oakley's technology related to wireless communication eyewear embodied in its Razrwire, O Rokr and O Rokr Pro lines of sunglasses. The '038 patent was the subject of reexamination, which resulted in the successful reissue of the patented on September 22, 2009. A true and correct copy of U.S. Patent No. 7,231,038 is attached hereto as Exhibit 2 and incorporated herein by reference.
- 8. Defendant is presently marketing and selling sunglass models, specifically including but not limited to its Confident Bluetooth enabled eyeglass, that embody the subject matter claimed in Oakley's U.S. Patent No. 7,231,038.
- On or about September 28, 2007, Oakley filed a lawsuit against Zeal 9. alleging infringement of U.S. Patent Nos. 7,013,009, 7,231,038, D404,754 and 5,387,949 patents. The lawsuit ultimately settled, and the parties entered into a settlement agreement. However, Zeal had already filed a reexamination request with the U.S.P.T.O. related to U.S. Patent Nos. 7,013,009 and 7,231,038, which ultimately resulted in the reissue of the '009 and '038 patents. As part of the terms of the settlement agreement, the parties agreed to the following terms, among others:

- a. If the claims of U.S. Patent Nos. 7,013,009 and 7,231,038 reissued as "substantially identical" (as that term is used in 35 U.S.C. § 252) then Zeal would be obligated to pay Oakley an additional ten thousand dollars (\$10,000.00) within thirty days of written notice of the Oakley reissued patents, and Oakley would have the right to seek past damages for intervening sales; and
- b. If the claims of U.S. Patent Nos. 7,013,009 and 7,231,038 reissued as "substantially identical" (as that term is used in 35 U.S.C. § 252) then Zeal would be obligated to cease selling its *Confidant* model, which Oakley accused of infringing these patents, within three months of written notice of the Oakley reissued patents.
- 10. Defendant received actual notice of Oakley's proprietary rights in its patents-in-suit by way of the 2007 litigation, correspondence from the U.S.P.T.O. directed to counsel of record for Defendant following the Reexamination proceeding, and correspondence from counsel for Oakley advising of Oakley opinion that the claims of the reissued patents read on the *Confidant* model sold by Defendant. Despite such notice, of Oakley's patent rights, Defendant has continued to sell its infringing models, even beyond the three month period designated in the 2007 settlement agreement. Accordingly, on information and belief, Defendant's infringement was willful and wanton.
- 11. Oakley is informed and believes and thereupon alleges that the sale of Defendant's infringing sunglasses resulted in lost sales, reduced the business and profit of Oakley, and has greatly injured the goodwill and reputation associated with Oakley, all to Oakley's damage in an amount not yet fully determined.
- 12. Moreover, the Defendant wrongfully profited from Oakley's invention by selling sunglasses that infringed Oakley's 7,013,009 and 7,231,038 patents. The

exact amount of profits realized by Defendant as a result of its infringing activities are presently unknown to Oakley, as are the exact amount of damages suffered by Oakley as a result of said activities. These profits and damages cannot be accurately ascertained without an accounting.

FIRST CLAIM FOR RELIEF

- 13. The allegations of paragraph 1 through 12 are repled and realleged as though fully set forth herein.
- 14. This is a claim for patent infringement and arises under 35 U.S.C. §§ 271 and 281.
  - 15. Jurisdiction is founded upon 28 U.S.C. §§ 1331 and 1338.
- 16. Oakley is the owner of U.S. Patent No. 7,013,009 which protects technology related to wireless communication eyewear as described and claimed in the patent, as set forth above. By statute, the patent is presumed to be valid and enforceable under 35 U.S.C. § 282.
- 17. Defendant, through its agents, suppliers, employees and servants, manufactured, imported, offered for sale and sold sunglasses which fall within the scope and claims contained in U.S. Patent No. 7,013,009, without any rights or license under that patent.
- 18. Oakley is informed and believes and thereupon alleges that Defendant willfully infringed upon Oakley's exclusive rights under the patent, with full notice and knowledge thereof. Oakley understands that Defendant is presently selling such infringing sunglasses, failed to cease the sale thereof, and will likely continue to do so unless restrained therefrom by this court, all to the great loss and injury of Oakley.
- 19. Oakley is informed and believes and thereupon alleges that Defendant has derived, received, and will continue to derive and receive from these acts of infringement, gains, profits and advantages in an amount not presently known to Oakley. By reason of these acts of infringement, Oakley has been and will continue to be greatly damaged.

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Defendant will continue to infringe U.S. Patent No. 7,013,009 to the 20. great and irreparable injury of Oakley, for which Oakley has no adequate remedy at law unless said Defendant is enjoined by this court.

### SECOND CLAIM FOR RELIEF

- 21. The allegations of paragraph 1 through 12 are repled and realleged as though fully set forth herein.
- 22. This is a claim for patent infringement and arises under 35 U.S.C. §§ 271 and 281.
  - 23. Jurisdiction is founded upon 28 U.S.C. §§ 1331 and 1338.
- 24. Oakley is the owner of U.S. Patent No. 7,231,038 which protects technology related to wireless communication eyewear as described and claimed in the patent, as set forth above. By statute, the patent is presumed to be valid and enforceable under 35 U.S.C. § 282.
- Defendant, through its agents, suppliers, employees and servants, 25. manufactured, imported, offered for sale and sold sunglasses which fall within the scope and claims contained in U.S. Patent No. 7,231,038, without any rights or license under that patent.
- 26. Oakley is informed and believes and thereupon alleges that Defendant willfully infringed upon Oakley's exclusive rights under the patent, with full notice and knowledge thereof. Oakley understands that Defendant is presently selling such infringing sunglasses, failed to cease the sale thereof, and will likely continue to do so unless restrained therefrom by this court, all to the great loss and injury of Oakley.
- 27. Oakley is informed and believes and thereupon alleges that Defendant has derived, received, and will continue to derive and receive from these acts of infringement, gains, profits and advantages in an amount not presently known to By reason of these acts of infringement, Oakley has been and will continue to be greatly damaged.

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28. Defendant will continue to infringe U.S. Patent No. 7,231,038 to the great and irreparable injury of Oakley, for which Oakley has no adequate remedy at law unless said Defendant is enjoined by this court.

#### THIRD CLAIM FOR RELIEF

- 29. The allegations of paragraph 1 through 12 are repled and realleged as though fully set forth herein.
  - 30. This is a claim for breach of contract.
  - 31. Jurisdiction is founded upon 28 U.S.C. §1367.
- 32. Oakley and Zeal are the parties to a 2008 settlement agreement arising out of patent infringement litigation that Oakley filed against Zeal in 2007.
- 33. As part of the terms of the settlement agreement, Zeal agreed to the following:
  - a. If the claims of U.S. Patent Nos. 7,013,009 and 7,231,038 reissued as "substantially identical" (as that term is used in 35 U.S.C. § 252) then Zeal would be obligated to pay Oakley an additional ten thousand dollars (\$10,000.00) within thirty days of written notice of the Oakley reissued patents, and Oakley would have the right to seek past damages for intervening sales; and
  - b. If the claims of U.S. Patent Nos. 7,013,009 and 7,231,038 reissued as "substantially identical" (as that term is used in 35 U.S.C. § 252) then Zeal would be obligated to cease selling its Confidant model, which Oakley accused of infringing these patents, within three months of written notice of the Oakley reissued patents.
- On or about August 6, 2009, Oakley advised Zeal that the '009 and 34. '038 patents would soon reissue and it was Oakley's opinion that the patent claims were "substantially identical" to the earlier claims and continued to read on the

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Confidant model. Despite such notice, Defendant has continued to sell the infringing model and has refused to pay Oakley the additional ten thousand dollars (\$10,000.00) under the settlement agreement.

- 35. In consequence of these actions, Defendant has breached its obligations.
- Oakley has been damaged by Defendant's actions. In particular, it has 36. been deprived of at least ten thousand dollars (\$10,000.00).
- 37. Oakley seeks that Defendant compensate it as required under the terms of the 2008 settlement agreement, account to Oakley for all intervening and other sales, and immediately cease all sales of the Confidant sunglass model.

WHEREFORE, Plaintiff Oakley, Inc. prays as follows:

- 1. That Defendant be adjudicated to have infringed U.S. Patent No. 7,013,009 and that said patent is valid, enforceable and is owned by Oakley;
- 2. That Defendant be adjudicated to have infringed U.S. Patent No. 7,231,038 and that said patent is valid, enforceable and is owned by Oakley;
- That Defendant and its agents, suppliers, servants, employees. managers, and officers, and all those persons in active concert or participation with them, be forthwith preliminarily and thereafter permanently enjoined from making, using, offering for sale or selling any sunglass which infringes U.S. Patent Nos. 7,013,009 and 7,231,038;
- 4. That Defendant be directed to file with this court and serve upon Oakley within 30 days after the service of the injunction, a report in writing under oath, setting forth in detail the manner and form in which Defendant has compiled with the injunction;
- 5. That Defendant be required to account to Oakley for its unlawful sales and compensate Oakley for damages, as provided for under 35 U.S.C. § 284, for any and all lost profits suffered by Oakley and in no event less than a reasonable royalty by reason of Defendant's infringement of U.S. Patent Nos. 7,013,009 and

### (12) EX PARTE REEXAMINATION CERTIFICATE (7089th)

### **United States Patent**

Warren

(10) **Number:** US 7,0

US 7,013,009 C1

(45) Certificate Issued: Sep. 29, 2009

### (54) EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

(75) Inventor: Peter Warren, Chattanooga, TN (US)

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

#### Reexamination Request:

No. 90/009,112, Apr. 16, 2008

#### Reexamination Certificate for:

Patent No.: 7,013,009
Issued: Mar. 14, 2006
Appl. No.: 09/888,280
Filed: Jun. 21, 2001

(51) Int. Cl.

H04M 1/00 (2006.01)

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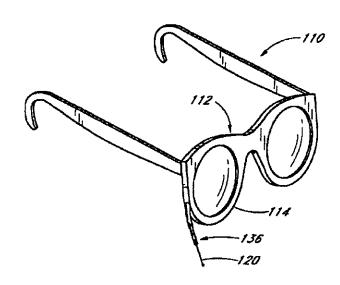
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Primary Examiner-Roland G. Foster

#### (57) ABSTRACT

A microphone, transmitter, speaker, receiver, and power source, all mounted to an eyeglasses frame, for sending and receiving signals wirelessly to and from a remote cell phone or other electronic device. The microphone and the transmitter can be mounted to extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use. Alternatively, the microphone, transmitter, speaker, receiver, and power source, can be mounted onto a clip-on or other attachment member that mounts onto a conventional eyeglasses frame, or to a hat or other article worn on the head.



<sup>\*</sup> cited by examiner

# US 7,013,009 C1 Page 2

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#### 1 EX PARTE REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claim 6 is cancelled.

Claims 1, 4, 5 and 7–13 are determined to be patentable as amended.

Claims 2 and 3, dependent on an amended claim, are determined to be patentable.

- 1. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame;
  - b) a microphone [coupled to] mounted inside of the member;
  - c) a transmitter [coupled to] mounted inside of the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
  - d) at least one speaker coupled to the member;
  - e) a receiver [coupled to] mounted inside of the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device; and
  - f) a segmented extension arm coupled to the member and speaker, wherein the segmented extension arm comprises:
    - a first segment attached to the member;
    - a second segment attached to the speaker; and
    - an intermediate segment attached to the first and second segments,
    - wherein each segment of the segmented extension arm is capable of extending generally downwardly towards a wear's ear when the member is mounted to an eyeglass frame worn by a wearer, and
  - wherein the segmented extension arm is capable of extending the speaker along a substantially straight 55 vertical path extending downwardly from the eyeglass frame when the member is mounted to an eyeglass frame worn by a wearer,
  - wherein the member comprises a lens holder and the connector comprises a clip adapted to removably mount the 60 clip-on lens holder onto a lens holder of the eyeglasses frame.
- 4. The wearable device of claim 1, further comprising a [first] *second* extension arm coupled to the member, wherein the microphone is coupled to the *second* extension arm.
- 5. The wearable device of claim 4, wherein the [first] second extension arm is pivotal or telescopic.

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- 7. The wearable device of claim [6] 1, wherein the [second] segmented extension arm is pivotal.
- 8. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device,5 the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame:
  - b) a microphone [coupled to] mounted inside of the mem-
  - c) a transmitter [coupled to] mounted inside of the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
  - d) at least one speaker coupled to the member; [and]
  - e) a receiver [coupled to] mounted inside of the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device: and
  - f) a segmented extension arm coupled to the member and speaker, wherein the segmented extension arm comprises:
    - a first segment attached to the member;
    - a second segment attached to the speaker; and
    - an intermediate segment attached to the first and second segments,
    - wherein the each segment of the segmented extension arm is capable of extending generally downwardly towards a wear's ear when the member is mounted to an eyeglass frame worn by a wearer, and
  - wherein the segmented extension arm is capable of advancing the speaker along a substantially straight vertical path extending downwardly from the eyeglass frame when the member is mounted to an eyeglass frame worn by a wearer,
  - wherein the member comprises a frame or sheet and the connector is formed by a bent section thereof and adapted to removably mount the frame or sheet onto a support arm of the eyeglasses frame.
  - 9. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
    - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame;
    - b) a microphone [coupled to] mounted inside of the mem-
    - c) a transmitter [coupled to] mounted inside of the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
    - d) at least one speaker coupled to the member; [and]
    - e) a receiver [coupled to] mounted inside of the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device; and
    - f) a segmented extension arm coupled to the member and speaker, wherein the segmented extension arm comprises:
      - a first segment attached to the member;
      - a second segment attached to the speaker; and
      - an intermediate segment attached to the first and second segments,
      - wherein each segment of the segmented extension arm is capable of extending generally downwardly

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towards a wear's ear when the member is mounted to an eyeglass frame worn by a wearer, and

wherein the segmented extension arm is capable of advancing the speaker along a substantially straight vertical path extending downwardly from the eyeglass frame when the member is mounted to an eyeglass frame worn by a wearer,

wherein the microphone is directional and oriented toward a user's mouth when wearing the eyeglasses, and the speaker is directional and oriented toward the user's ear when wearing the eyeglasses.

10. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:

- a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame:
- b) a microphone coupled to the member;
- c) a transmitter [coupled to] mounted inside of the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
- d) at least one speaker coupled to the member;
- e) a receiver [coupled to] mounted inside of the member, 25
  in communication with the speaker, and adapted to
  receive wireless signals from the remote electronic
  device; and
- [f) a first extension arm coupled to the member, wherein the microphone is coupled to the extension arm]
- f) a segmented extension arm coupled to the member and microphone, wherein the segmented extension arm comprises:
  - a first segment attached to the member;
  - a second segment attached to the microphone; and an intermediate segment attached to the first and second segments,
  - wherein each segment of the segmented extension arm is capable of extending generally downwardly towards a wear's mouth when the member is mounted to an eyeglass frame worn by a wearer, and

wherein the segmented extension arm is capable of advancing the microphone along a substantially straight vertical path extending downwardly from the eyeglass frame when the member is mounted to an eyeglass frame worn by a wearer.

11. The wearable device of claim 10, wherein the [first] segmented extension arm is pivotal or telescopic.

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- 12. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame;
  - b) a microphone [coupled to] mounted inside of the member:
- c) a transmitter [coupled to] mounted inside of the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
- d) at least one speaker coupled to the member;
- e) a receiver [coupled to] mounted inside of the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device; and
- f) a [second] segmented extension arm coupled to the member and speaker, wherein the [speaker is coupled to the extension arm] segmented extension arm comprises:
- a first segment attached to the member;
- a second segment attached to the speaker; and
- an intermediate segment attached to the first and second segments,
- wherein each segment of the segmented extension arm is capable of extending generally downwardly towards a wear's ear when the member is mounted to an eyeglass frame worn by a wearer, and
- wherein the segmented extension arm is capable of advancing the speaker along a substantially straight vertical path extending downwardly from the eyeglass frame when the member is mounted to an eyeglass frame worn by a wearer.
- 13. The wearable device of claim 12, wherein the [second] segmented extension arm is pivotal.

\* \* \* \*

US007013009B2

## (12) United States Patent Warren

(10) Patent No.: US 7,013,009 B2 (45) Date of Patent: Mar. 14, 2006

## (54) EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

- (75) Inventor: Peter Warren, Chattanooga, TN (US)
- (73) Assignee: Oakley, Inc., Foothill Ranch, CA (US)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 791 days.

- (21) Appl. No.: 09/888,280
- (22) Filed: Jun. 21, 2001
- (65) Prior Publication Data

US 2002/0197961 A1 Dec. 26, 2002

- (51) Int. Cl.
  - H04M 1/00 (2006.01)

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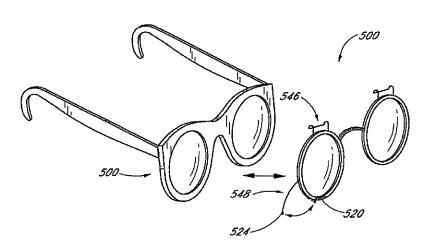
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Primary Examiner—Bing Q. Bui
(74) Attorney, Agent, or Firm—Knobbe, Martens, Olson & Bear, LLP

#### (57) ABSTRACT

A microphone, transmitter, speaker, receiver, and power source, all mounted to an eyeglasses frame, for sending and receiving signals wirelessly to and from a remote cell phone or other electronic device. The microphone and the transmitter can be mounted to extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use. Alternatively, the microphone, transmitter, speaker, receiver, and power source, can be mounted onto a clip-on or other attachment member that mounts onto a conventional eyeglasses frame, or to a hat or other article worn on the head.

#### 13 Claims, 7 Drawing Sheets

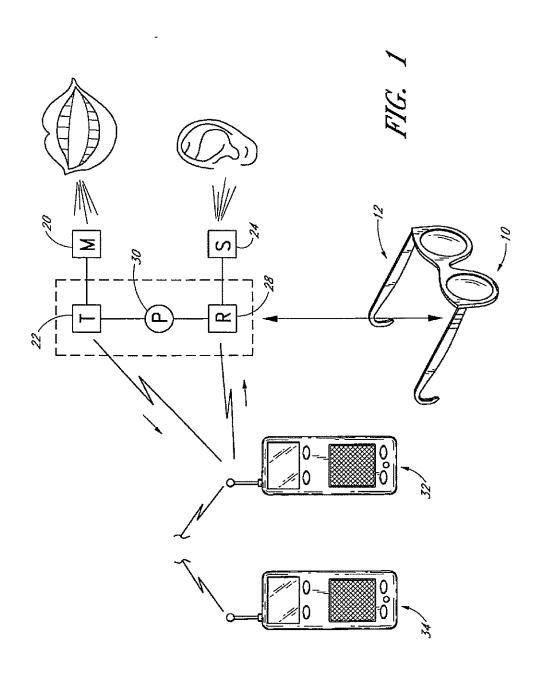


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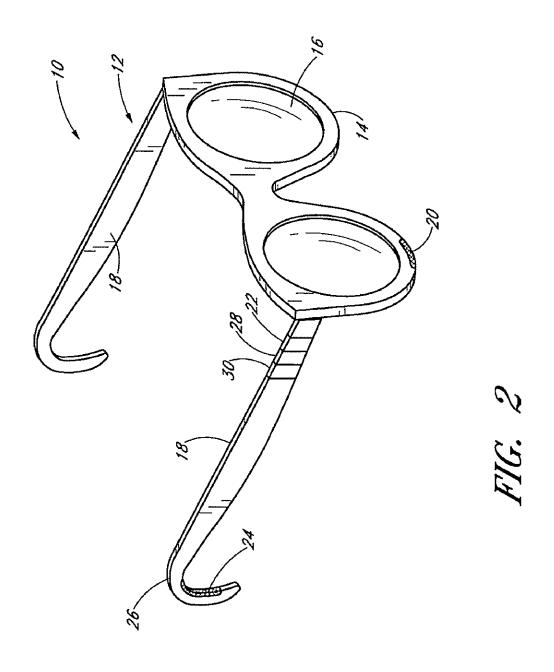
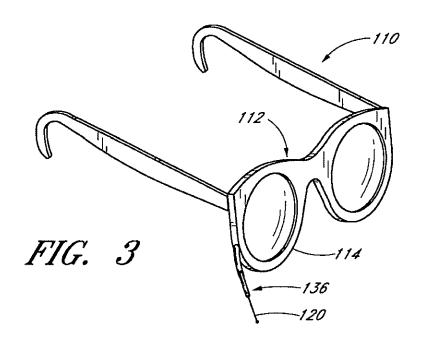


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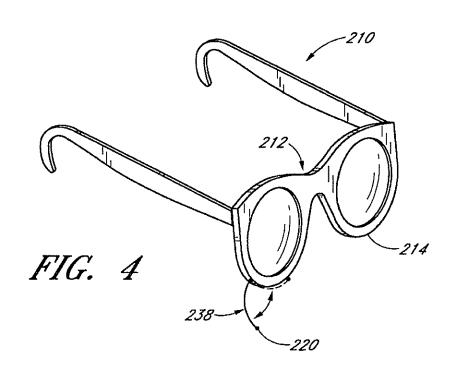
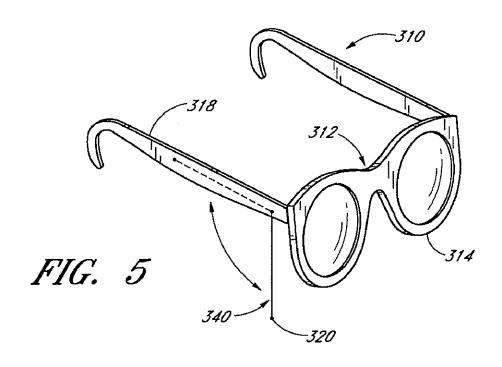


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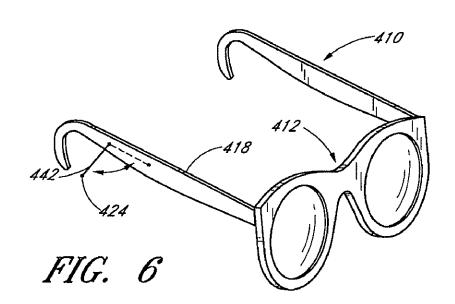
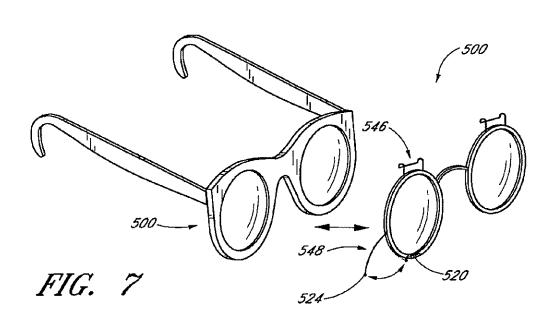
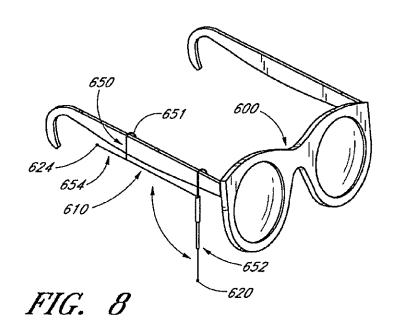


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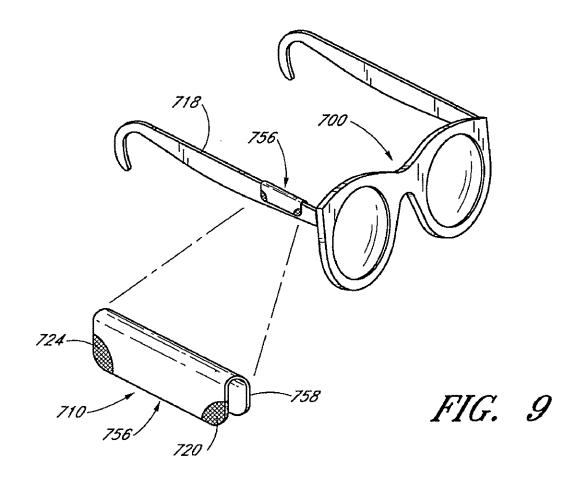
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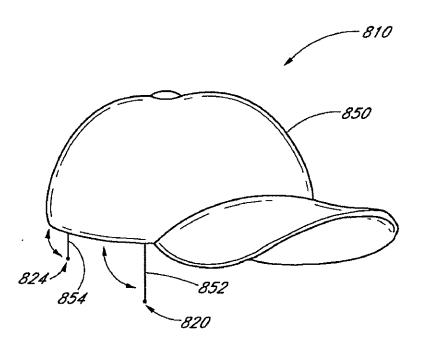


FIG. 10

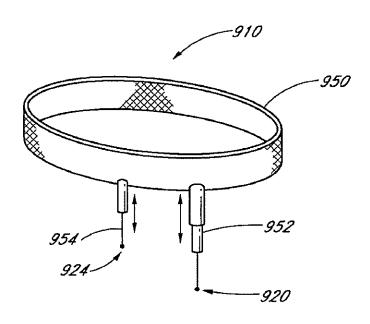


FIG. 11

#### 1

## EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

#### TECHNICAL FIELD

This invention relates to wearable audio communication devices and, more particularly, to eyeglasses with wireless audio communication features for remote use of a cell phone or other electronic device.

#### BACKGROUND OF THE INVENTION

Technological advances in the telecommunications and computer-related industries have provided cell phones, web phones, personal digital assistants (PDA's), hand held com- 15 puters, lap tops, and other portable devices that allow for instant communication and access to information. These portable devices provide the benefit of allowing people to be connected wherever they are. A drawback to the use of cell phones, however, is that speaking on a cell phone can be a 20 disturbance to bystanders. This is especially the case in public and other places where others generally do not want to be disturbed, such as restaurants, theaters, churches, and so forth. Similarly, using PDA's, laptops, etc. with capabilities for voice recognition and/or accessing and playing 25 music or other audio can be an annoyance to others. Additionally, holding a cell phone to one's head while driving an automobile can be unsafe because the driver has only one hand available to operate the vehicle. Furthermore, holding a cell phone can be difficult or at least a distraction in many 30 other situations, such as while typing on a keyboard, walking down a street or in a mall with one's hands full, while riding a bike, and so forth.

In order to provide an easier, safer, and quieter way to speak on a cell phone, there have been developed hands-free headsets with microphones and speakers connected by wires or wirelessly to a phone. These headsets enable the wearer to park their cell phone on their belt or elsewhere, and to have a conversation on their cell phone by speaking and listening via the headset. However, such headsets are typically donned and removed each time the cell phone is used, which can be a significant inconvenience. Also, such headsets must be stored somewhere when they are removed and not in use, making it more likely that the user will forget them, break them, or be further inconvenienced by carrying a case for them.

Accordingly, there remains a need in the art for a wearable audio communication device for remote use of a cell phone or other electronic device, that permits the user to easily, safely, and quietly communicate using the cell phone while 50 engaged in another activity, without the user having to hold the cell phone in his hand, and without the inconvenience of carrying around an extra headset device, donning the headset to make or receive a call, and removing and storing the headset afterward.

#### SUMMARY OF THE INVENTION

The present invention fulfills these and other needs by providing wearable communications devices for sending 60 and receiving signals wirelessly to and from a remote cell phone or other electronic device. Generally described, the invention comprises an eyeglasses device having an eyeglasses frame and having a microphone, a transmitter, a speaker, a receiver, and a power source connected together 65 and mounted to the frame. Whenever a user has on the eyeglasses, he can converse over the cell phone privately,

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easily, and in a hands-free manner. Particularly for people who wear prescription glasses, the invention provides a great convenience, as they will often or most always be wearing their glasses. Thus, users can have private, hand-free conversations on their cell phones, without having to put on a headset, and afterward remove, store, and carry the headset.

In an exemplary embodiment of the invention, the eyeglasses frame has a lens holder and two support arms, and
the microphone is directional and coupled to the lens holder
(or one of the support arms) and oriented toward a user's
mouth. The transmitter communicates by wires or otherwise
with the microphone, and sends signals wirelessly (such as
by radio frequency) to the cell phone. One (or more)
speakers are coupled to one (or more) of the support arms
and positioned adjacent to the user's ear. The receiver
communicates by wires or otherwise with the speaker, and
receives signals from the cell phone. The power source is
electrically connected to the transmitter and to the receiver
for providing the power needed to operate them.

Alternative embodiments additionally have pivotal, telescopic, and/or other extension arms for the microphone and/or the speaker. These embodiments allow the microphone and/or speaker to be extended, pivoted, or otherwise moved to a position for ease of use, and then retracted, pivoted, or otherwise moved to a stored position out of the way when not in use.

Additional alternative embodiments provide wearable communication devices with a clip-on member (instead of an eyeglasses frame) that mounts to a pair of conventional eyeglasses. Similar to the above embodiments, these have a microphone, a transmitter, a receiver, a speaker, and a power source, all mounted to the clip-on member. These embodiments permit retrofitting the wearable device onto a user's current glasses so that it is not necessary to go out a buy a new pair of glasses. Also, the user can easily change the wearable device from one pair of glasses to another.

In one of these embodiments, the clip-on member comprises a conventional clip-on lens holder of the type that is commonly used for clipping tinted sunglasses lenses onto regular prescription glass frames. In other of these embodiments, the clip-on member comprises a frame or sheet with a clip for removably mounting to the support arm of the eyeglasses frame. The microphone and speaker can be mounted directly onto the clip-on member in a spaced apart arrangement, or they can be mounted on extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use.

Further alternative embodiments provide wearable communication devices with a frame in the form of a hat, headband, earmuffs, or another article that can be worn on a user's head. Similar to the above embodiments, these have a microphone, a transmitter, a receiver, a speaker, and a power source, all mounted to the frame. These embodiments provided similar benefits, for instance, a user can wear a hat and use the communications features to conveniently and privately communicate on his or her cell phone.

The specific techniques and structures employed by the invention to improve over the drawbacks of the prior systems and accomplish the advantages described above will become apparent from the following detailed description of the embodiments of the invention and the appended drawings and claims.

#### 3 BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic diagram of an exemplary embodiment of the eyeglasses of the present invention in use with a cell phone.

FIG. 2 is a perspective view of the exemplary embodiment of FIG. 1, showing an eyeglasses frame with a microphone and a speaker.

FIG. 3 is a perspective detail view of a first alternative embodiment of the present invention, showing the microphone on a telescopic arm.

FIG. 4 is a perspective detail view of a second alternative embodiment, showing the microphone on a pivotal arm coupled to a lens holder.

FIG. 5 is a perspective detail view of a third alternative coupled to a support arm.

FIG. 6 is a perspective detail view of a fourth alternative embodiment, showing the speaker on a pivotal arm coupled to the support arm.

FIG. 7 is a perspective view of a fifth alternative embodi- 20 ment, showing a clip-on lens holder with a microphone and a speaker.

FIG. 8 is a perspective view of a sixth alternative embodiment, showing a clip-on frame member with a microphone and a speaker attached to the frame member.

FIG. 9 is a perspective view of a seventh alternative embodiment, showing a clip-on sheet member with a builtin microphone and a built-in speaker.

FIG. 10 is a side view of an eighth alternative embodiment, showing a hat with a built-in microphone and a 30 built-in speaker.

FIG. 11 is a perspective view of a ninth alternative embodiment, showing a headband with a built-in microphone and a built-in speaker.

#### DETAILED DESCRIPTION OF THE **EMBODIMENTS**

The present invention may be embodied in eyeglasses with communication features for sending and receiving signals wirelessly to and from an electronic device such as a cell phone. FIG. 1 shows one such embodiment, referred to as the eyeglasses 10, in use with a cell phone 32. The eyeglasses 10 have a microphone 20, a transmitter 22, a speaker 24, a receiver 28, and a power source 30, all mounted onto an eyeglasses frame 12. The microphone 20 45 for receiving sounds from the user's mouth to be transmitted receives sound from the user's mouth (or from the user clapping or otherwise making a sound) and converts the sound into a signal representing the sound, and the transmitter 22 sends the signal to the cell phone 32. The cell phone 32 in turn transmits the signal to another cell phone 50 34 or other electronic device. Similarly, the receiver 28 receives a signal representing a sound from the other cell phone 34, and sends the signal to the speaker 24. The speaker 28 then converts the signal to an audible sound to be heard by one or both of the user's ears.

Thus, the user can converse over the cell phone 32 privately, easily, and in a hands-free manner whenever he has on the eyeglasses 10. For example, the eyeglasses 10 can have prescription lenses, and for a person that wears his glasses much of the time, the communication features of the eyeglasses 10 will be readily available for use much of the time. Thus, the user can simply put on his eyeglasses 10 in the morning and take them off at night, as he normally does with his regular glasses, and wear his cell phone 32 on his belt, carry it in a purse or bag, or otherwise carry the cell phone remotely from the eyeglasses 10. In this manner, the 65 user can converse on his cell phone 32 anytime and anywhere, privately, without disturbing bystanders.

Also, when wearing the eyeglasses 10, the user need not don and remove a headset every time he makes or receives a call, and need not store and carry the headset in a case or the like. Additionally, because the eyeglasses 10 provide for hands-free communication over the cell phone 32, the user can simultaneously converse on the cell phone 32 while engaging in another activity such as typing on a keyboard, driving, biking, mowing the lawn, eating, etc. Of course, the eyeglasses 10 can be alternatively provided as sun glasses or mere fashion glasses (with zero power lenses), to provide the convenience of the readily available communication features described above.

It will be understood that the cell phone 32 may need to be adapted for sending and receiving signals wirelessly to embodiment, showing the microphone on a pivotal arm 15 and from the eyeglasses 10. Such adaptations are known in the art, and can be readily made to provide a cell phone or other electronic device that cooperatively functions with the eyeglasses 10 as described herein. Also, the eyeglasses 10 and the cell phone 32 can be adapted for sending and receiving visual images to and from each other, and/or for sending and receiving data in other forms. Additionally, the eyeglasses 10 and/or the cell phone 32 can include encryption software providing for secure transmissions to and/or from each other. Furthermore, the eyeglasses 10 also can be used to communicate with web phones, conventional land line phones, PDA's, laptops, hand held computers, personal computers, household appliances, portable or stationary televisions, portable or stationary radios, compact disc players, tape players, or the like, and/or other electronic devices with capabilities for voice recognition and/or for accessing and playing music or other sounds.

FIG. 2 shows an exemplary embodiment of the eyeglasses 10 of the present invention, with the eyeglasses frame 12 comprising a lens holder 14 with lenses 16, and two support arms 18 that extend over and are supported by a user's ears. The eyeglasses frame 12 can be provided by conventional eyeglass frames made of metal, plastic, or another material, having any of a variety of shapes, as is well known in the art. The lenses 16 can be provided by prescription lenses, tinted sunglasses lenses, a combination thereof, or zero power lenses, or no lenses can be provided, as may be desired. While the eyeglasses 10 are typically provided with two lenses and two support arms, it will be understood that the eyeglasses alternatively can be provided by a monocle.

The microphone 20 is mounted to the eyeglasses frame 12 to the cell phone. The microphone 20 can be provided by a conventional miniature microphone that is embedded into the frame 12. Also, the microphone 20 can be oriented toward the user's mouth and can be directional so that it picks up the user's voice when wearing the eyeglasses 10, but does not pick up as much ambient sound. Although one microphone 20 is shown mounted to the lens holder 14, alternatively, it can be mounted to the one of the support arms 18, and/or two or another number of microphones can be provided. Thus, the eyeglasses 10 can be provided with two directional microphones, each oriented toward user's mouth when wearing the eyeglasses, and each positioned on a lower portion of one of the two loops forming the lens holder 14. Also, a sensitivity control can be provided for adjusting the level of sound that the microphone 20 picks up.

The transmitter 22 is mounted to the eyeglasses frame 12 and communicates with the microphone 20 by wire, optic fiber, wirelessly, or otherwise. The transmitter 22 can be of a conventional miniature type that is configured to send signals to the cell phone. For example, the transmitter 22 can be configured with BLUETOOTH or other software for wireless transmission of radio signals or another frequency audio or other signals to the cell phone.

The speaker 24 is mounted to the eyeglasses frame 12 for playing sounds to be heard by the user's ear. The speaker 24 can be provided by a conventional miniature speaker that is embedded into the frame 12. Also, the speaker 24 can be oriented toward the user's ear and can be directional so that it plays sounds toward the user's ear but does not play sounds that can be easily heard by bystanders. For example, the speaker 24 can be a conventional miniature bone-type speaker that is mounted on an ear rest 26 of one of the support arms 18 generally adjacent to the user's ear when wearing the eyeglasses 10. Although one speaker 24 is shown mounted to the ear rest 26, alternatively, it can be mounted to another portion of one of the support arms 18 or to the lens holder 14. Also, two or anther number of speakers can be provided for producing stereo, quadraphonic, or other sound. Also, a volume control can be provided for adjusting 15 the level of sound that the speaker 24 plays.

The receiver 28 is mounted to the eyeglasses frame 12 and communicates with the speaker 24 by wire, optic fiber, wirelessly, or otherwise. The receiver 28 can be of a conventional miniature type that is configured to receive signals 20 from the cell phone. For example, the receiver 28 can be configured with BLUETOOTH or other software for wireless reception of radio signals or another frequency audio or other signals from the cell phone.

The power source 30 is mounted to the eyeglasses frame 25 12 and electrically connected by a wire to the transmitter 22 and the receiver 28. The power source 30 provides the power to operate the transmitter 22 and the receiver 28. For example, the power source 30 can be provided by one or another number of batteries that screw into a receptacle in the frame 12. Alternatively, other portable power sources can be used, such as conventional batteries, photovoltaic cells, combinations thereof, and so forth. Controls can be provided for automatically shutting off the device after a predetermined period of time and automatically turning on the device upon reception of a signal from the cell phone, and a manual on/off switch and/or a low power indicator can be provided.

It will be understood by those skilled in the art that the transmitter 22, receiver 28, and power source 30 can be selected to provide low power, short range signals, so as not to interfere with signals to and from other devices in the vicinity of the user. However, these components are also selected to provide signals strong enough for transmission and reception between the eyeglasses 10 on the user's head and the cell phone 32 disposed remotely from the eyeglasses, such as on the user's belt, carrying bag or purse, etc. Also, the transmitter 22 and the receiver 28 can have optics for receiving infrared signals, instead of or in addition to radio frequency signals.

Additionally, the transmitter 22, receiver 28, and/or battery 30 can be provided as separate components or as a single component with a single antenna, mounted to the cycglasses frame 12 at another position selected for ease of manufacturing. Also, the wires connecting the microphone 20 to the transmitter 22, the receiver 28 to the speaker 24, and/or the battery 30 to the transmitter 22 and the receiver 28, can be embedded into or mounted onto the frame 12. Furthermore, the microphone 20, transmitter 22, receiver 28, speaker 24, and/or battery 30 can be provided as a retrofit kit, with each component having clips for mounting onto a conventional cycglasses frame, with the wires not integral to but instead routable along the frame. Additionally or alternatively, one or more wires with connectors can be provided that connect the cycglasses and the cell phone, as may be desired.

FIG. 3 shows a first alternative embodiment 110 of the 65 present invention, with the microphone 120 attached to a telescopic extension arm 136 that retracts into the lens

holder 114 or another part of the eyeglasses frame 112. FIG. 4 shows a second alternative embodiment 210, with the microphone 220 attached to a pivotal extension arm 238 that is pivotally connected to the lens holder 214. Such an extension arm 238 can be curved to conform to the shape of the lens holder 214. FIG. 5 shows a third alternative embodiment 310, with the microphone 320 attached to a pivotal extension arm 340 that is pivotally connected to the corresponding support arm 318. Such an extension arm 340 can be generally linear to conform to the shape of the corresponding support arm 318.

In these alternative embodiments, the microphone can be extended, pivoted, or otherwise moved into a first position when needed for use, and retracted, pivoted, or otherwise moved to a second non-obtrusive position when not needed. Also, the extension arm can be generally rigid or flexible, with or without a telescopic, pivotal, or other connection to the eyeglasses frame, as may be desired.

FIG. 6 shows a fourth alternative embodiment 410 of the present invention, with the speaker 424 attached to a pivotal extension arm 442 that is pivotally connected to one of the support arms 418. Of course, the extension arm can be telescopic, generally rigid, or generally flexible, as may be desired. In this alternative embodiment, the speaker 424 can be extended, pivoted, or otherwise moved into a first position when needed for use, and retracted, pivoted, or otherwise moved to a second non-obtrusive position when not needed.

FIGS. 7-9 show additional alternative embodiments of the present invention. In these embodiments, instead of the communication components being mounted directly to the eyeglasses, there is provided an attachment member having at least one connector that permits removably mounting the member onto a conventional eyeglasses frame. The connector is provided by a clip, though another mounting structure can be used as desired, such as a hook, snap, screw, or slide. The communication components (including the transmitter, the receiver, and the power source) are mounted to the clip-on member so that they can be readily utilized when the clip-on member is mounted to the user's glasses. Accordingly, the user can selectively mount the clip-on member on different pairs of glasses, as may be desired where the user has separate prescription and sun glasses, has multiple glasses that she wears depending on the mood and the occasion, purchases new eyeglasses, etc.

For example, FIG. 7 shows a fifth alternative embodiment 510 with the attachment member provided by a conventional clip-on lens holder 544 and the connector provided by two (or another number) of clips 546 for mounting onto the lens holder of a conventional eyeglasses frame 500. The microphone 520 and the speaker 524 are mounted to the lens holder 544. The speaker 524 is connected to the lens holder 544 by a pivotal extension arm 548 or by another extension arm, and the microphone can be embedded or otherwise attached to the clip-on lens holder.

FIG. 8 shows a sixth alternative embodiment 610 with the attachment member provided by a frame 650 and the connector provided by a clip 651 formed by a bent section of the frame 650, for mounting onto one of the support arms of a conventional eyeglasses frame 600. The microphone 620 and the speaker 624 are attached to the clip frame 650, with the microphone 620 attached by a pivotal and/or telescopic extension arm 652 or other extension arm, and the speaker 624 attached by a pivotal extension arm 654 or other extension arm.

FIG. 9 shows a seventh alternative embodiment 710 with the attachment member provided by a sheet 756 and the connector provided by a clip 758 formed by a bent section of the sheet 756 for mounting onto one of the support arms of a conventional eyeglasses frame. The microphone 720

and the speaker 724 are built into the sheet 756 at spaced apart positions, and are directional and oriented towards the user's mouth and ear, respectively, when wearing the clip-on attachment member on glasses. Of course, the devices of the sixth and seventh alternative embodiments could be used with devices other than eyeglasses, such as hats, visors, headbands, and so forth.

FIGS. 10 and 11 show further alternative embodiments of the present invention. In these embodiments, the communication components are mounted to articles that users commonly wear on their head for fashion, warmth, or other reasons. The microphone is directional and oriented toward the user's mouth, and the speaker is disposed adjacent to and oriented toward the user's ear, thereby permitting the user to conveniently and privately communicate on his or her cell phone.

In particular, FIG. 10 shows an eighth alternative embodiment 810 comprising a hat that forms a frame 850, with the microphone 820 and the speaker 824 attached to the frame 850 by pivotal, telescopic, static, or other extension arms 852 and 854, respectively. Similarly, FIG. 11 shows a ninth alternative embodiment 910 comprising a headband that forms a frame 950, with the microphone 920 and the speaker 924 attached to the frame 950 by pivotal, telescopic, static, or other extension arms 952 and 954, respectively.

It will be understood that the term "hat" as used herein 25 means any structure that is typically worn on a person's head, including a baseball cap, cowboy hat, motorcycle or sports helmet, visor, derby, bonnet, panama, sun hat, beret, tam-o'-shanter, yarmulke, beenie, fedora, and so forth. It will be further understood that, in addition to hats, the communication features can be provided on any other article worn on a person's head, such as earmuffs, ski masks, hoods on jackets, and so forth.

In view of the foregoing, it will be appreciated that present invention provides several wearable audio communication devices for remotely using a cell phone or other electronic device, that permit the user to easily, safely, and privately communicate using the cell phone, even while engaged in another activity. Furthermore, the devices provided by the invention obviate the need for the user to hold the cell phone in his hand to use the phone, or to carry around, put on, and remove a headset device to use the phone privately and hands-free.

While certain embodiments are described above with particularity, these should not be construed as limitations on the scope of the invention. It should be understood, therefore, that the foregoing relates only to exemplary embodiments of the present invention, and that numerous changes may be made therein without departing from the spirit and scope of the invention as defined by the following claims.

The invention claimed is:

- 1. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame:
  - b) a microphone coupled to the member;
  - c) a transmitter coupled to the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
  - d) at least one speaker coupled to the member;
  - e) a receiver coupled to the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device; and wherein the member comprises a lens holder and the connector

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- comprises a clip adapted to removably mount the clip-on lens holder onto a lens holder of the eyeglasses frame.
- 2. The wearable device of claim 1, wherein the member comprises a frame or sheet and the connector is formed by a bent section thereof and adapted to removably mount the frame or sheet onto a support arm of the cycglasses frame.
- 3. The wearable device of claim 1, wherein the microphone is directional and oriented toward a user's mouth when wearing the eyeglasses, and the speaker is directional and oriented toward the user's car when wearing the eyeglasses.
- 4. The wearable device of claim 1, further comprising a first extension arm coupled to the member, wherein the microphone is coupled to the extension arm.
- 5. The wearable device of claim 4, wherein the first extension arm is pivotal or telescopic.
- 6. The wearable device of claim 1, further comprising a second extension arm coupled to the member, wherein the speaker is coupled to the extension arm.
- 7. The wearable device of claim 6, wherein the second extension arm is pivotal.
- 8. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame:
  - b) a microphone coupled to the member;
  - c) a transmitter coupled to the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
  - d) at least one speaker coupled to the member; and
  - e) a receiver coupled to the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device;
  - wherein the member comprises a frame or sheet and the connector is formed by a bent section thereof and adapted to removably mount the frame or sheet onto a support arm of the eyeglasses frame.
- 9. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame:
  - b) a microphone coupled to the member;
  - c) a transmitter coupled to the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
  - d) at least one speaker coupled to the member; and
  - e) a receiver coupled to the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device;
  - wherein the microphone is directional and oriented toward a user's mouth when wearing the eyeglasses, and the speaker is directional and oriented toward the user's ear when wearing the eyeglasses.
- 10. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
- a) a member having at least one connector adapted to removably mount the member onto the eyeglasses frame;
- b) a microphone coupled to the member;

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- c) a transmitter coupled to the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
- d) at least one speaker coupled to the member;
- e) a receiver coupled to the member, in communication 5 with the speaker, and adapted to receive wireless signals from the remote electronic device; and
- f) a first extension arm coupled to the member, wherein the microphone is coupled to the extension arm.
- 11. The wearable device of claim 10, wherein the first 10 extension arm is pivotal or telescopic.
- 12. A wearable device for use with an eyeglasses frame and for audio communication with a remote electronic device, the wearable device comprising:
  - a) a member having at least one connector adapted to 15 removably mount the member onto the eyeglasses frame;

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- b) a microphone coupled to the member;
- c) a transmitter coupled to the member, in communication with the microphone, and adapted to send wireless signals to the remote electronic device;
- d) at least one speaker coupled to the member;
- e) a receiver coupled to the member, in communication with the speaker, and adapted to receive wireless signals from the remote electronic device; and
- f) a second extension arm coupled to the member, wherein the speaker is coupled to the extension arm.
- 13. The wearable device of claim 12, wherein the second extension arm is pivotal.

\* \* \* \* \*

### (12) EX PARTE REEXAMINATION CERTIFICATE (7080th)

### **United States Patent**

Warren

(10) Number: US 7,231,038 C1

(45) Certificate Issued: Sep. 22, 2009

## (54) EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

- (75) Inventor: Peter Warren, Chattanooga, TN (US)
- (73) Assignee: Oakley, Inc., Foothill, CA (US)

#### Reexamination Request:

No. 90/009,088, Mar. 20, 2008

#### Reexamination Certificate for:

Patent No.: 7,231,038
Issued: Jun. 12, 2007
Appl. No.: 11/371,692
Filed: Mar. 9, 2006

#### Related U.S. Application Data

- (63) Continuation of application No. 09/888,280, filed on Jun. 21, 2001, now Pat. No. 7,013,009.
- (51) Int. Cl. *H04M 1/00* (2006.01) *H04B 1/38* (2006.01)

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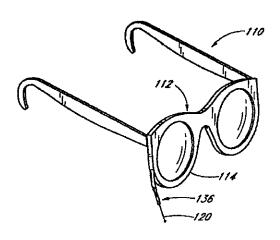
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Primary Examiner-Roland G. Foster

#### (57) ABSTRACT

A microphone, transmitter, speaker, receiver, and power source, all mounted to an eyeglasses frame, for sending and receiving signals wirelessly to and from a remote cell phone or other electronic device. The microphone and the transmitter can be mounted to extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use. Alternatively, the microphone, transmitter, speaker, receiver, and power source, can be mounted onto a clip-on or other attachment member that mounts onto a conventional eyeglasses frame, or to a hat or other article worn on the head.



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#### 1 EX PARTE REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in Italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 10 and 22 are cancelled.

Claims 1, 13 and 21 are determined to be patentable as amended.

Claims 2-9, 11, 12, 14-21, 23 and 24, dependent on an amended claim, are determined to be patentable.

- Eyeglasses for audio communication, comprising: an eyeglass frame comprising a lens holder and two support arms;
- a microphone [coupled to] mounted inside of the eyeglass frame;
- at least one speaker coupled to the eyeglass frame; and
  a segmented connecting arm having a proximal portion
  [and], a distal portion, and an intermediate portion
  positioned between the proximal and distal portions,
  wherein each of said proximal, distal, and intermediate
  portions are capable of extending generally downwardly towards a wearer's ear when worn, wherein
  the segmented connecting arm is coupled to the eye-

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glass frame at the proximal portion and [coupled] to the at least one speaker at the distal portion,

wherein the segmented connecting arm is configured to advance the speaker along a plurality of paths including a substantially straight vertical path extending downwardly from the eyeglass frame when worn, from a first position to a second position, and

wherein the segmented connecting arm is fixed to the eyeglass frame.

- Eyeglasses for audio communication, comprising: an eyeglass frame comprising a lens holder and two support arms;
- a microphone coupled to the eyeglass frame;
- at least one speaker coupled to the eyeglass frame; and
- a segmented connecting arm having a proximal portion[and], a distal portion, and an intermediate portion positioned between the proximal and distal portions.
  - wherein each of said proximal, distal, and intermediate portions are capable of extending generally downwardly towards a wearer's ear when worn, wherein the segmented connecting arm is coupled to the eyeglass frame at the proximal portion and [coupled] to the microphone at the distal portion,
- wherein the segmented connecting arm is configured to advance the microphone along a plurality of paths including a substantially straight vertical path extending downwardly from the eyeglass frame when worn, from a first position to a second position, and
- wherein the segmented connecting arm is fixed to the eyeglass frame.
- 21. The eyeglass for audio [communication] communication of claim 20, wherein the transceiver comprises a Bluetooth transceiver

\* \* \* \* \*

#### US007231038B2

## (12) United States Patent Warren

(10) Patent No.: US 7,231,038 B2 (45) Date of Patent: Jun. 12, 2007

## (54) EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

(75) Inventor: Peter Warren, Chattanooga, TN (US)

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

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 11/371,692

(22) Filed: Mar. 9, 2006

#### (65) Prior Publication Data

US 2006/0183427 A1 Aug. 17, 2006

#### Related U.S. Application Data

(63) Continuation of application No. 09/888,280, filed on Jun. 21, 2001, now Pat. No. 7,013,009.

(51) Int. Cl. *H04M 1/00* (2006.01) *H04B 1/38* (2006.01)

See application file for complete search history.

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Primary Examiner—Bing Q. Bui (74) Attorney, Agent, or Firm—Knobbe, Martens, Olson & Bear, LLP

#### (57) ABSTRACT

A microphone, transmitter, speaker, receiver, and power source, all mounted to an eyeglasses frame, for sending and receiving signals wirelessly to and from a remote cell phone or other electronic device. The microphone and the transmitter can be mounted to extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use. Alternatively, the microphone, transmitter, speaker, receiver, and power source, can be mounted onto a clip-on or other attachment member that mounts onto a conventional eyeglasses frame, or to a hat or other article worn on the head.

#### 24 Claims, 7 Drawing Sheets

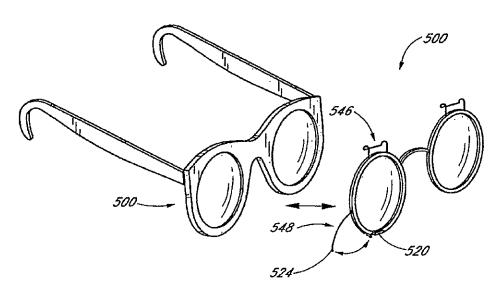


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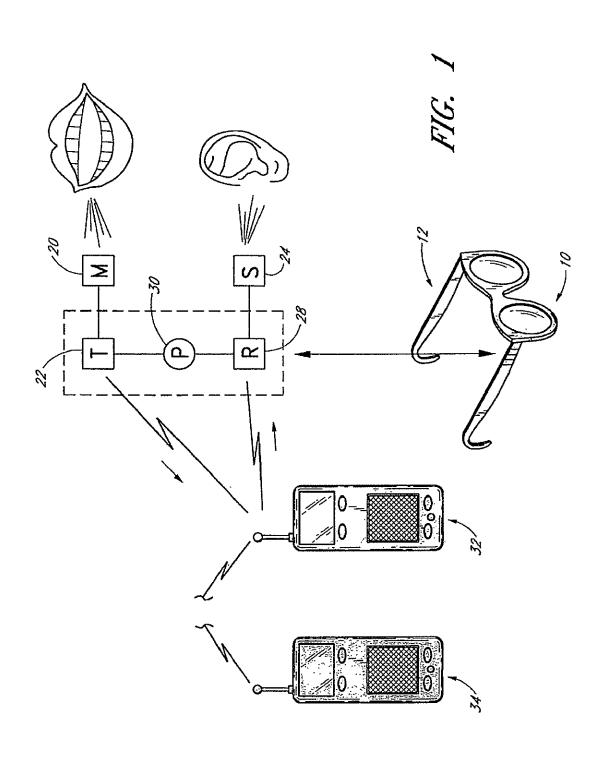
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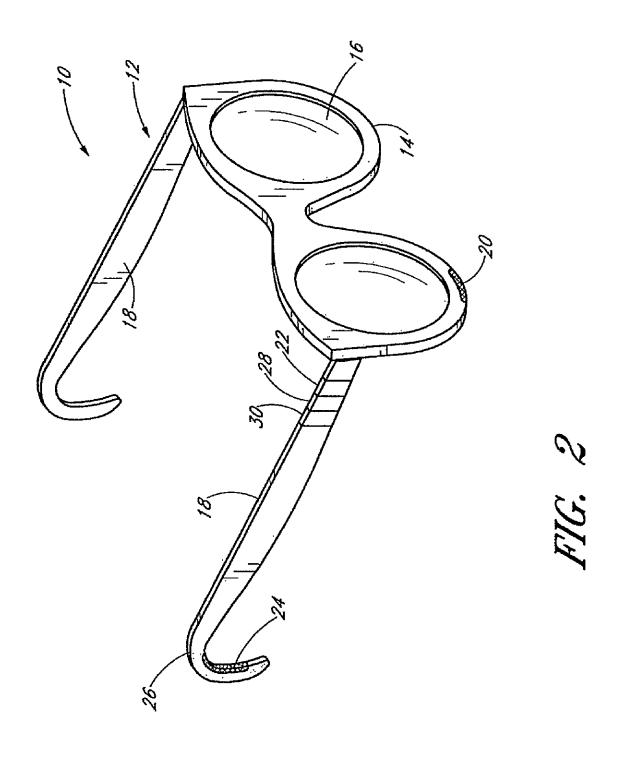
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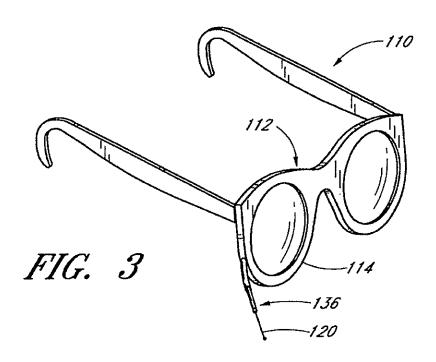


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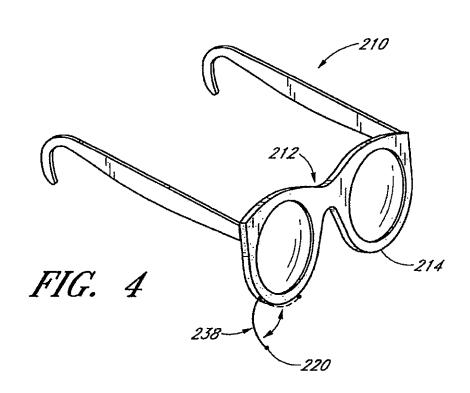
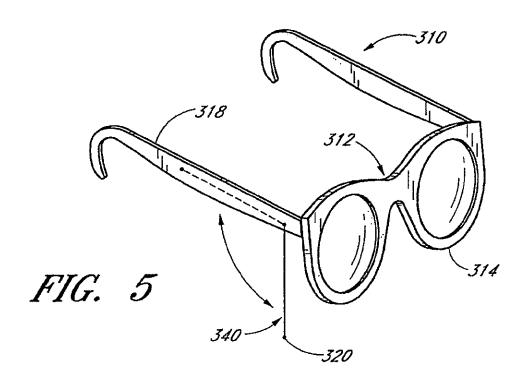


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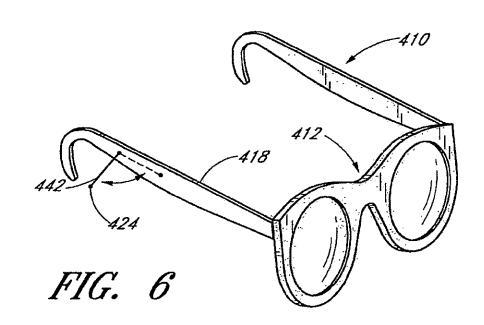
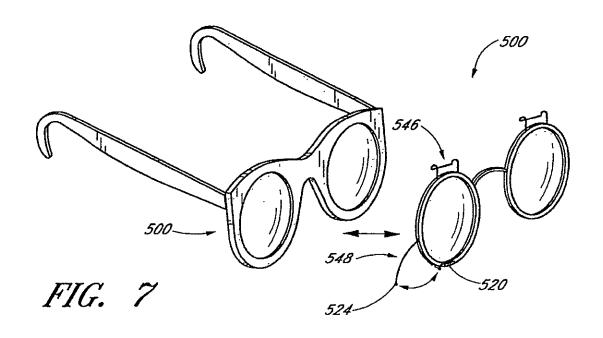


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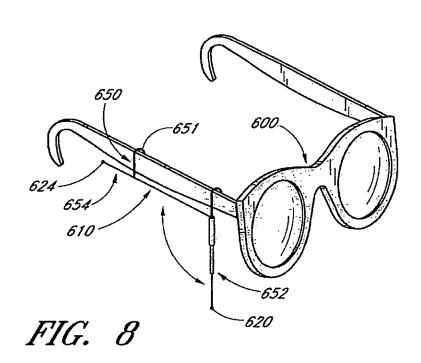
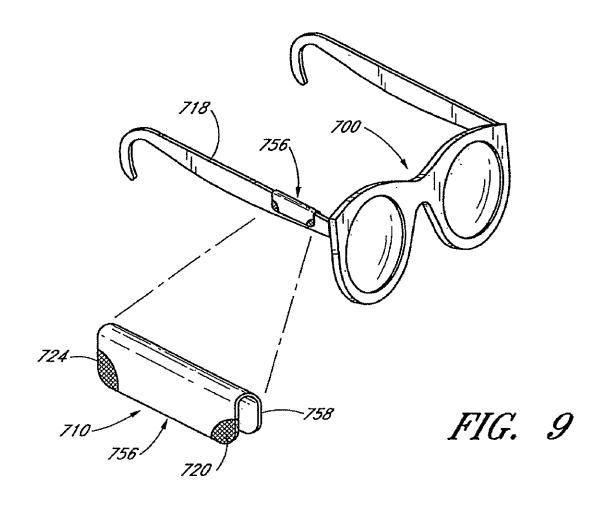


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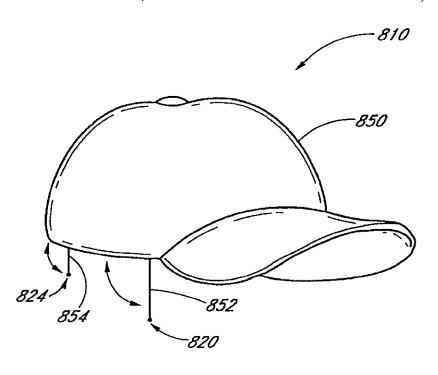


FIG. 10

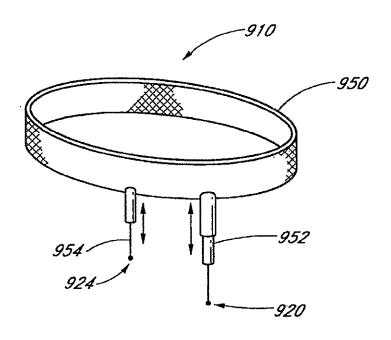


FIG. 11

#### US 7,231,038 B2

#### 1 EYEGLASSES WITH WIRELESS COMMUNICATION FEATURES

#### CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation of U.S. application Ser. No. 09/888,280, filed Jun. 21, 2001, now U.S. Pat. No. 7,013,009, which is incorporated by reference herein.

#### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention relates to wearable audio communication 15 devices and, more particularly, to eyeglasses with wireless audio communication features for remote use of a cell phone or other electronic device.

#### 2. Description of the Related Art

Technological advances in the telecommunications and 20 computer-related industries have provided cell phones, web phones, personal digital assistants (PDA's), hand held computers, lap tops, and other portable devices that allow for instant communication and access to information. These portable devices provide the benefit of allowing people to be 25 connected wherever they are. A drawback to the use of cell phones, however, is that speaking on a cell phone can be a disturbance to bystanders. This is especially the case in public and other places where others generally do not want to be disturbed, such as restaurants, theaters, churches, and 30 so forth. Similarly, using PDA's, laptops, etc. with capabilities for voice recognition and/or accessing and playing music or other audio can be an annoyance to others. Additionally, holding a cell phone to one's head while driving an automobile can be unsafe because the driver has only one 35 hand available to operate the vehicle. Furthermore, holding a cell phone can be difficult or at least a distraction in many other situations, such as while typing on a keyboard, walking down a street or in a mall with one's hands full, while riding a bike, and so forth.

In order to provide an easier, safer, and quieter way to speak on a cell phone, there have been developed hands-free headsets with microphones and speakers connected by wires or wirelessly to a phone. These headsets enable the wearer to park their cell phone on their belt or elsewhere, and to 45 have a conversation on their cell phone by speaking and listening via the headset. However, such headsets are typically donned and removed each time the cell phone is used, which can be a significant inconvenience. Also, such headsets must be stored somewhere when they are removed and 50 not in use, making it more likely that the user will forget them, break them, or be further inconvenienced by carrying a case for them.

Accordingly, there remains a need in the art for a wearable audio communication device for remote use of a cell phone 55 or other electronic device, that permits the user to easily, safely, and quietly communicate using the cell phone while engaged in another activity, without the user having to hold the cell phone in his hand, and without the inconvenience of carrying around an extra headset device, donning the headset 60 to make or receive a call, and removing and storing the headset afterward.

#### SUMMARY OF THE INVENTION

The present invention fulfills these and other needs by providing wearable communications devices for sending

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and receiving signals wirelessly to and from a remote cell phone or other electronic device. Generally described, the invention comprises an eyeglasses device having an eyeglasses frame and having a microphone, a transmitter, a speaker, a receiver, and a power source connected together and mounted to the frame. Whenever a user has on the eyeglasses, he can converse over the cell phone privately, easily, and in a hands-free manner. Particularly for people who wear prescription glasses, the invention provides a great convenience, as they will often or most always be wearing their glasses. Thus, users can have private, handfree conversations on their cell phones, without having to put on a headset, and afterward remove, store, and carry the headset.

In an exemplary embodiment of the invention, the eyeglasses frame has a lens holder and two support arms, and the microphone is directional and coupled to the lens holder (or one of the support arms) and oriented toward a user's mouth. The transmitter communicates by wires or otherwise with the microphone, and sends signals wirelessly (such as by radio frequency) to the cell phone. One (or more) speakers are coupled to one (or more) of the support arms and positioned adjacent to the user's ear. The receiver communicates by wires or otherwise with the speaker, and receives signals from the cell phone. The power source is electrically connected to the transmitter and to the receiver for providing the power needed to operate them.

Alternative embodiments additionally have pivotal, telescopic, and/or other extension arms for the microphone and/or the speaker. These embodiments allow the microphone and/or speaker to be extended, pivoted, or otherwise moved to a position for ease of use, and then retracted, pivoted, or otherwise moved to a stored position out of the way when not in use.

Additional alternative embodiments provide wearable communication devices with a clip-on member (instead of an eyeglasses frame) that mounts to a pair of conventional eyeglasses. Similar to the above embodiments, these have a microphone, a transmitter, a receiver, a speaker, and a power source, all mounted to the clip-on member. These embodiments permit retrofitting the wearable device onto a user's current glasses so that it is not necessary to go out a buy a new pair of glasses. Also, the user can easily change the wearable device from one pair of glasses to another.

In one of these embodiments, the clip-on member comprises a conventional clip-on lens holder of the type that is commonly used for clipping tinted sunglasses lenses onto regular prescription glass frames. In other of these embodiments, the clip-on member comprises a frame or sheet with a clip for removably mounting to the support arm of the eyeglasses frame. The microphone and speaker can be mounted directly onto the clip-on member in a spaced apart arrangement, or they can be mounted on extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use.

Further alternative embodiments provide wearable communication devices with a frame in the form of a hat, headband, earmuffs, or another article that can be worn on a user's head. Similar to the above embodiments, these have a microphone, a transmitter, a receiver, a speaker, and a power source, all mounted to the frame. These embodiments provided similar benefits, for instance, a user can wear a hat and use the communications features to conveniently and privately communicate on his or her cell phone.

The specific techniques and structures employed by the invention to improve over the drawbacks of the prior systems and accomplish the advantages described above will

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become apparent from the following detailed description of the embodiments of the invention and the appended drawings and claims.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic diagram of an exemplary embodiment of the eyeglasses of the present invention in use with a cell phone.

FIG. 2 is a perspective view of the exemplary embodiment of FIG. 1, showing an eyeglasses frame with a microphone and a speaker.

FIG. 3 is a perspective detail view of a first alternative embodiment of the present invention, showing the microphone on a telescopic arm.

FIG. 4 is a perspective detail view of a second alternative embodiment, showing the microphone on a pivotal arm coupled to a lens holder.

FIG. 5 is a perspective detail view of a third alternative embodiment, showing the microphone on a pivotal arm 20 coupled to a support arm.

FIG. 6 is a perspective detail view of a fourth alternative embodiment, showing the speaker on a pivotal arm coupled to the support arm.

FIG. 7 is a perspective view of a fifth alternative embodiment, showing a clip-on lens holder with a microphone and a speaker.

FIG. 8 is a perspective view of a sixth alternative embodiment, showing a clip-on frame member with a microphone and a speaker attached to the frame member.

FIG. 9 is a perspective view of a seventh alternative embodiment, showing a clip-on sheet member with a built-in microphone and a built-in speaker.

FIG. 10 is a side view of an eighth alternative embodiment, showing a hat with a built-in microphone and a 35 built-in speaker.

FIG. 11 is a perspective view of a ninth alternative embodiment, showing a headband with a built-in microphone and a built-in speaker.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention may be embodied in eyeglasses with communication features for sending and receiving 45 signals wirelessly to and from an electronic device such as a cell phone. FIG. 1 shows one such embodiment, referred to as the eyeglasses 10, in use with a cell phone 32. The eyeglasses 10 have a microphone 20, a transmitter 22, a speaker 24, a receiver 28, and a power source 30, all 50 mounted onto an eyeglasses frame 12. The microphone 20 receives sound from the user's mouth (or from the user clapping or otherwise making a sound) and converts the sound into a signal representing the sound, and the transmitter 22 sends the signal to the cell phone 32. The cell 55 phone 32 in turn transmits the signal to another cell phone 34 or other electronic device. Similarly, the receiver 28 receives a signal representing a sound from the other cell phone 34, and sends the signal to the speaker 24. The speaker 28 then converts the signal to an audible sound to be 60 heard by one or both of the user's ears.

Thus, the user can converse over the cell phone 32 privately, easily, and in a hands-free manner whenever he has on the eyeglasses 10. For example, the eyeglasses 10 can have prescription lenses, and for a person that wears his 65 glasses much of the time, the communication features of the eyeglasses 10 will be readily available for use much of the

time. Thus, the user can simply put on his eyeglasses 10 in the morning and take them off at night, as he normally does with his regular glasses, and wear his cell phone 32 on his

belt, carry it in a purse or bag, or otherwise carry the cell phone remotely from the eyeglasses 10. In this manner, the user can converse on his cell phone 32 anytime and anywhere, privately, without disturbing bystanders.

Also, when wearing the eyeglasses 10, the user need not don and remove a headset every time he makes or receives a call, and need not store and carry the headset in a case or the like. Additionally, because the eyeglasses 10 provide for hands-free communication over the cell phone 32, the user can simultaneously converse on the cell phone 32 while engaging in another activity such as typing on a keyboard, driving, biking, mowing the lawn, eating, etc. Of course, the eyeglasses 10 can be alternatively provided as sun glasses or mere fashion glasses (with zero power lenses), to provide the convenience of the readily available communication features described above.

It will be understood that the cell phone 32 may need to be adapted for sending and receiving signals wirelessly to and from the eyeglasses 10. Such adaptations are known in the art, and can be readily made to provide a cell phone or other electronic device that cooperatively functions with the eyeglasses 10 as described herein. Also, the eyeglasses 10 and the cell phone 32 can be adapted for sending and receiving visual images to and from each other, and/or for sending and receiving data in other forms. Additionally, the eyeglasses 10 and/or the cell phone 32 can include encryption software providing for secure transmissions to and/or from each other. Furthermore, the eyeglasses 10 also can be used to communicate with web phones, conventional land line phones, PDA's, laptops, hand held computers, personal computers, household appliances, portable or stationary televisions, portable or stationary radios, compact disc players, tape players, or the like, and/or other electronic devices with capabilities for voice recognition and/or for accessing and playing music or other sounds.

FIG. 2 shows an exemplary embodiment of the eyeglasses 10 of the present invention, with the eyeglasses frame 12 comprising a lens holder 14 with lenses 16, and two support arms 18 that extend over and are supported by a user's ears. The eyeglasses frame 12 can be provided by conventional eyeglass frames made of metal, plastic, or another material, having any of a variety of shapes, as is well known in the art. The lenses 16 can be provided by prescription lenses, tinted sunglasses lenses, a combination thereof, or zero power lenses, or no lenses can be provided, as may be desired. While the eyeglasses 10 are typically provided with two lenses and two support arms, it will be understood that the eyeglasses alternatively can be provided by a monocle.

The microphone 20 is mounted to the eyeglasses frame 12 for receiving sounds from the user's mouth to be transmitted to the cell phone. The microphone 20 can be provided by a conventional miniature microphone that is embedded into the frame 12. Also, the microphone 20 can be oriented toward the user's mouth and can be directional so that it picks up the user's voice when wearing the eyeglasses 10, but does not pick up as much ambient sound. Although one microphone 20 is shown mounted to the lens holder 14, alternatively, it can be mounted to the one of the support arms 18, and/or two or another number of microphones can be provided. Thus, the eyeglasses 10 can be provided with two directional microphones, each oriented toward user's mouth when wearing the eyeglasses, and each positioned on a lower portion of one of the two loops forming the lens

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holder 14. Also, a sensitivity control can be provided for adjusting the level of sound that the microphone 20 picks up.

The transmitter 22 is mounted to the eyeglasses frame 12 and communicates with the microphone 20 by wire, optic fiber, wirelessly, or otherwise. The transmitter 22 can be of a conventional miniature type that is configured to send signals to the cell phone. For example, the transmitter 22 can be configured with BLUETOOTH or other software for wireless transmission of radio signals or another frequency audio or other signals to the cell phone.

The speaker 24 is mounted to the eyeglasses frame 12 for playing sounds to be heard by the user's ear. The speaker 24 can be provided by a conventional miniature speaker that is embedded into the frame 12. Also, the speaker 24 can be oriented toward the user's ear and can be directional so that 15 it plays sounds toward the user's ear but does not play sounds that can be easily heard by bystanders. For example, the speaker 24 can be a conventional miniature bone-type speaker that is mounted on an ear rest 26 of one of the support arms 18 generally adjacent to the user's ear when 20 wearing the eyeglasses 10. Although one speaker 24 is shown mounted to the ear rest 26, alternatively, it can be mounted to another portion of one of the support arms 18 or to the lens holder 14. Also, two or anther number of speakers can be provided for producing stereo, quadraphonic, or other 25 sound. Also, a volume control can be provided for adjusting the level of sound that the speaker 24 plays.

The receiver 28 is mounted to the eyeglasses frame 12 and communicates with the speaker 24 by wire, optic fiber, wirelessly, or otherwise. The receiver 28 can be of a conventional miniature type that is configured to receive signals from the cell phone. For example, the receiver 28 can be configured with BLUETOOTH or other software for wireless reception of radio signals or another frequency audio or other signals from the cell phone.

The power source 30 is mounted to the eyeglasses frame 12 and electrically connected by a wire to the transmitter 22 and the receiver 28. The power source 30 provides the power to operate the transmitter 22 and the receiver 28. For example, the power source 30 can be provided by one or another number of batteries that screw into a receptacle in the frame 12. Alternatively, other portable power sources can be used, such as conventional batteries, photovoltaic cells, combinations thereof, and so forth. Controls can be provided for automatically shutting off the device after a 45 predetermined period of time and automatically turning on the device upon reception of a signal from the cell phone, and a manual on/off switch and/or a low power indicator can be provided.

It will be understood by those skilled in the art that the transmitter 22, receiver 28, and power source 30 can be selected to provide low power, short range signals, so as not to interfere with signals to and from other devices in the vicinity of the user. However, these components are also selected to provide signals strong enough for transmission 55 and reception between the eyeglasses 10 on the user's head and the cell phone 32 disposed remotely from the eyeglasses, such as on the user's belt, carrying bag or purse, etc. Also, the transmitter 22 and the receiver 28 can have optics for receiving infrared signals, instead of or in addition to 60 radio frequency signals.

Additionally, the transmitter 22, receiver 28, and/or battery 30 can be provided as separate components or as a single component with a single antenna, mounted to the eyeglasses frame 12 at another position selected for ease of 65 manufacturing. Also, the wires connecting the microphone 20 to the transmitter 22, the receiver 28 to the speaker 24,

and/or the battery 30 to the transmitter 22 and the receiver 28, can be embedded into or mounted onto the frame 12. Furthermore, the microphone 20, transmitter 22, receiver 28, speaker 24, and/or battery 30 can be provided as a retrofit kit, with each component having clips for mounting onto a conventional eyeglasses frame, with the wires not integral to but instead routable along the frame. Additionally or alternatively, one or more wires with connectors can be provided that connect the eyeglasses and the cell phone, as may be

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FIG. 3 shows a first alternative embodiment 110 of the present invention, with the microphone 120 attached to a telescopic extension arm 136 that retracts into the lens holder 114 or another part of the eyeglasses frame 112. FIG. 4 shows a second alternative embodiment 210, with the microphone 220 attached to a pivotal extension arm 238 that is pivotally connected to the lens holder 214. Such an extension arm 238 can be curved to conform to the shape of the lens holder 214. FIG. 5 shows a third alternative embodiment 310, with the microphone 320 attached to a pivotal extension arm 340 that is pivotally connected to the corresponding support arm 318. Such an extension arm 340 can be generally linear to conform to the shape of the corresponding support arm 318.

In these alternative embodiments, the microphone can be extended, pivoted, or otherwise moved into a first position when needed for use, and retracted, pivoted, or otherwise moved to a second non-obtrusive position when not needed. Also, the extension arm can be generally rigid or flexible, with or without a telescopic, pivotal, or other connection to the eyeglasses frame, as may be desired.

FIG. 6 shows a fourth alternative embodiment 410 of the present invention, with the speaker 424 attached to a pivotal extension arm 442 that is pivotally connected to one of the support arms 418. Of course, the extension arm can be telescopic, generally rigid, or generally flexible, as may be desired. In this alternative embodiment, the speaker 424 can be extended, pivoted, or otherwise moved into a first position when needed for use, and retracted, pivoted, or otherwise moved to a second non-obtrusive position when not needed.

FIGS. 7-9 show additional alternative embodiments of the present invention. In these embodiments, instead of the communication components being mounted directly to the eyeglasses, there is provided an attachment member having at least one connector that permits removably mounting the member onto a conventional eyeglasses frame. The connector is provided by a clip, though another mounting structure can be used as desired, such as a hook, snap, screw, or slide. The communication components (including the transmitter, the receiver, and the power source) are mounted to the clip-on member so that they can be readily utilized when the clip-on member is mounted to the user's glasses. Accordingly, the user can selectively mount the clip-on member on different pairs of glasses, as may be desired where the user has separate prescription and sun glasses, has multiple glasses that she wears depending on the mood and the occasion, purchases new eyeglasses, etc.

For example, FIG. 7 shows a fifth alternative embodiment 510 with the attachment member provided by a conventional clip-on lens holder 544 and the connector provided by two (or another number) of clips 546 for mounting onto the lens holder of a conventional eyeglasses frame 500. The microphone 520 and the speaker 524 are mounted to the lens holder 544. The speaker 524 is connected to the lens holder 544 by a pivotal extension arm 548 or by another extension

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arm, and the microphone can be embedded or otherwise attached to the clip-on lens holder.

FIG. 8 shows a sixth alternative embodiment 610 with the attachment member provided by a frame 650 and the connector provided by a clip 651 formed by a bent section of the frame 650, for mounting onto one of the support arms of a conventional eyeglasses frame 600. The microphone 620 and the speaker 624 are attached to the clip frame 650, with the microphone 620 attached by a pivotal and/or telescopic extension arm 652 or other extension arm, and the speaker 10 624 attached by a pivotal extension arm 654 or other extension arm.

FIG. 9 shows a seventh alternative embodiment 710 with the attachment member provided by a sheet 756 and the connector provided by a clip 758 formed by a bent section of the sheet 756 for mounting onto one of the support arms of a conventional eyeglasses frame. The microphone 720 and the speaker 724 are built into the sheet 756 at spaced apart positions, and are directional and oriented towards the user's mouth and ear, respectively, when wearing the clip-on attachment member on glasses. Of course, the devices of the sixth and seventh alternative embodiments could be used with devices other than eyeglasses, such as hats, visors, headbands, and so forth.

FIGS. 10 and 11 show further alternative embodiments of the present invention. In these embodiments, the communication components are mounted to articles that users commonly wear on their head for fashion, warmth, or other reasons. The microphone is directional and oriented toward the user's mouth, and the speaker is disposed adjacent to and oriented toward the user's ear, thereby permitting the user to conveniently and privately communicate on his or her cell phone.

In particular, FIG. 10 shows an eighth alternative embodiment 810 comprising a hat that forms a frame 850, with the microphone 820 and the speaker 824 attached to the frame 850 by pivotal, telescopic, static, or other extension arms 852 and 854, respectively. Similarly, FIG. 11 shows a ninth alternative embodiment 910 comprising a headband that forms a frame 950, with the microphone 920 and the speaker 924 attached to the frame 950 by pivotal, telescopic, static, or other extension arms 952 and 954, respectively.

It will be understood that the term "hat" as used herein means any structure that is typically worn on a person's head, including a baseball cap, cowboy hat, motorcycle or sports helmet, visor, derby, bonnet, panama, sun hat, beret, tam-o'-shanter, yarmulke, beenie, fedora, and so forth. It will be further understood that, in addition to hats, the communication features can be provided on any other article worn on a person's head, such as earmuffs, ski masks, hoods on jackets, and so forth.

In view of the foregoing, it will be appreciated that present invention provides several wearable audio communication devices for remotely using a cell phone or other 55 electronic device, that permit the user to easily, safely, and privately communicate using the cell phone, even while engaged in another activity. Furthermore, the devices provided by the invention obviate the need for the user to hold the cell phone in his hand to use the phone, or to carry around, put on, and remove a headset device to use the phone privately and hands-free.

While certain embodiments are described above with particularity, these should not be construed as limitations on the scope of the invention. It should be understood, there-65 fore, that the foregoing relates only to exemplary embodiments of the present invention, and that numerous changes

8 may be made therein without departing from the spirit and scope of the invention as defined by the following claims.

What is claimed is:

- 1. Eyeglasses for audio communication, comprising:
- an eyeglass frame comprising a lens holder and two support arms;
- a microphone coupled to the eyeglass frame;
- at least one speaker coupled to the eyeglass frame; and a segmented connecting arm having a proximal portion and a distal portion, the segmented connecting arm coupled to the eyeglass frame at the proximal portion and coupled to the at least one speaker at the distal portion, wherein the segmented connecting arm is configured to advance the speaker from a first position to a second position.
- 2. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm comprises a plurality of segments.
- 3. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm is configured to retract into the lens holder.
- 4. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm is configured to retract into one of the support arms.
- 5. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm extends downward to a location beyond a bottom surface of the lens holder.
- The eyeglass for audio communication of claim 1, wherein the segmented connecting arm is curved.
- 7. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm is coupled to the eyeglass frame at a pivot.
- 8. The eyeglass for audio communication of claim 1, further comprising a transceiver in communication with the microphone and speaker.
- 9. The eyeglass for audio communication of claim 8, wherein the transceiver comprises a Bluetooth transceiver.
- -10. The eyeglass for audio communication of claim-l, wherein the segmented connecting arm is removably coupled to the eyeglass frame:
- 11. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm is configured to retract into the eyeglass frame.
- 12. The eyeglass for audio communication of claim 1, wherein the segmented connecting arm comprises a telescoping arm.
- 13. Eyeglasses for audio communication, comprising:
- an eyeglass frame comprising a lens holder and two support arms;
- a microphone coupled to the eyeglass frame;
- at least one speaker coupled to the eyeglass frame; and
- a segmented connecting arm having a proximal portion and a distal portion, the segmented connecting arm coupled to the eyeglass frame at the proximal portion and coupled to the microphone at the distal portion, wherein the segmented connecting arm is configured to advance the microphone from a first position to a second position.
- 14. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm comprises a plurality of segments.
- 15. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is configured to retract into the lens holder.

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- 16. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is configured to retract into one of the support arms.
- 17. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm extends downward 5 to a location beyond a bottom surface of the lens holder.
- 18. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is curved.
- 19. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is coupled to the 10 eyeglass frame at a pivot.
- 20. The eyeglass for audio communication of claim 13, further comprising a transceiver in communication with the microphone and speaker.

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- 21. The eyeglass for audio communication of claim 20, wherein the transceiver comprises a Bluetooth transceiver.
- 22. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is removably coupled to the cyeglass frame...
- 23. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm is configured to retract into the eyeglass frame.
- 24. The eyeglass for audio communication of claim 13, wherein the segmented connecting arm comprises a telescoping arm.

\* \* \* \* 4

# UNITED STATES DISTRICT COURT CENTRAL DISTRICT OF CALIFORNIA

## NOTICE OF ASSIGNMENT TO UNITED STATES MAGISTRATE JUDGE FOR DISCOVERY

This case has been assigned to District Judge Dean D. Pregerson and the assigned discovery Magistrate Judge is Alicia G. Rosenberg.

The case number on all documents filed with the Court should read as follows:

CV10- 6340 DDP (AGRx)

Pursuant to General Order 05-07 of the United States District Court for the Central District of California, the Magistrate Judge has been designated to hear discovery related motions.

A	Il discovery related motion	s shou	ıld be noticed on the calendar	of the	e Magistrate Judge
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	py of this notice must be served , a copy of this notice must be se		e summons and complaint on all de n all plaintiffs).	fendai	nts (if a removal action is
Sub	sequent documents must be filed	d at the	following location:		
[X]	Western Division 312 N. Spring St., Rm. G-8 Los Angeles, CA 90012	Ц	Southern Division 411 West Fourth St., Rm. 1-053 Santa Ana, CA 92701-4516		Eastern Division 3470 Twelfth St., Rm. 134 Riverside, CA 92501
Failu	re to file at the proper location will re	sult in y	our documents being returned to you.		

AO 440 (	Rev.	12/09)	Summons	in	n	Civil	Action

### UNITED STATES DISTRICT COURT

for the

Central District of California

OAKLEY, INC., a Washington corporation	)		
Plaintiff V.	)	Civil Action No.	CV10-6340 DDP(AGRX)
ZEAL OPTICS, INC., a Delaware corporation	)		
	)		

#### SUMMONS IN A CIVIL ACTION

To: (Defendant's name and address)

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are: Gregory K. Nelson, Esq.

Weeks, Kaufman, Nelson & Johnson 462 Stevens Ave., Suite 310 Solana Beach, CA 92075

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

		CLERK OF COURT			
Date:	AUC 2 5 2010	NANCY CASTRO			
		Signature of Clerk or Deputy Clerk			
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## UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA CIVIL COVER SHEET

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Page 1 of 2

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## UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA CIVIL COVER SHEET

VIII(a). IDENTICAL CASES: Has If yes, list case number(s):	this action been pr	eviously filed in this court an	nd dismissed, remanded or closed? ♥No □ Yes			
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			f other than California; or Foreign Country, in which EACH named defendant resides.  If this box is checked, go to item (c).			
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Key to Statistical codes relating to So	cial Security Cases:					
Nature of Suit Code	Abbreviation	Substantive Statement of	f Cause of Action			
861	НІА	All claims for health insurance benefits (Medicare) under Title 18, Part A, of the Social Security Act, as amended. Also, include claims by hospitals, skilled nursing facilities, etc., for certification as providers of services under the program. (42 U.S.C. 1935FF(b))				
862	BL	All claims for "Black Lung" benefits under Title 4, Part B, of the Federal Coal Mine Health and Safety Act of 1969. (30 U.S.C. 923)				
863	DIWC	All claims filed by insured workers for disability insurance benefits under Title 2 of the Social Security Act, as amended; plus all claims filed for child's insurance benefits based on disability. (42 U.S.C. 405(g))				
863	DIWW	All claims filed for widows or widowers insurance benefits based on disability under Title 2 of the Social Security Act, as amended. (42 U.S.C. 405(g))				
864	SSID	All claims for supplements Act, as amended.	al security income payments based upon disability filed under Title 16 of the Social Security			
RSI All claims for retirement (old age) and survivor U.S.C. (g))			old age) and survivors benefits under Title 2 of the Social Security Act, as amended. (42			

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