

Petitioner Luxottica of America Inc.'s Demonstratives For Oral Argument

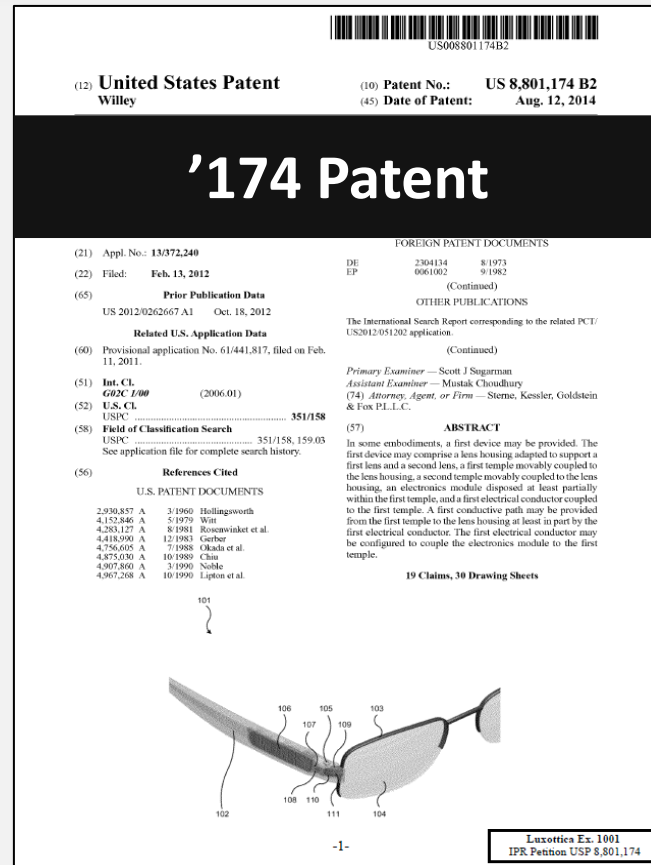
October 6, 2025

Luxottica of America Inc. v. e-Vision Optics, LLC

IPR2024-01070 (Patent 8,801,174)

Luxottica v. e-Vision
IPR2024-01070
Luxottica Ex. 1031

Claim 1: “Constrain” Limitation



Claim 1	
1[pre]	1. A first device, comprising:
1[a]	a lens housing adapted to support a first lens and a second lens;
1[b]	a first temple movably coupled to the lens housing;
1[c]	a second temple movably coupled to the lens housing;
1[d]	an electronics module disposed at least partially within the first temple;
1[e]	a first electrical conductor coupled to the first temple,
1[f]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and
1[g]	a second electrical conductor coupled to the first temple,
1[h]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;
1[i]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple <u>to constrain</u> the electronics module.

'174 Patent

(Ex. 1001, 11:50–57)

The Parties Agree This Is The Ordinary Meaning

Petitioner

- ☑ Petitioner in the IPR
- ☑ Petitioner's expert

"constrain": to provide support (i.e. a restraining force) to retain the module in a fixed position within the temple

Patent Owner

- ☑ Patent Owner in IPR
- ☑ Patent Owner's expert



7 Q It's your opinion that the definition of
8 "constrain" offered by the inventors of the '174
9 patent does not differ from the plain and ordinary
10 meaning of the word "constrain," correct?
11 A Correct. That's what I just said.

(Exhibit 1028, 17:7-11)

PO Adds “Without Minor Movement” To The Ordinary Meaning



PTAB

Patent Owner's Sur-Reply

- PO argues “the module must be held in a fixed position without minor movement”

The parties’ dispute, therefore, appears to be limited to the level or degree to which the claimed electronics module must be constrained. (Reply, 7-8; POR, 37-39.)

Patent Owner contends that the ’174 patent explicitly distinguishes between “substantially constrain” and “constrain” and explains that substantial constraint allows for “some minor movement of the electronics module within the temple.” (POR, 37-38 (quoting EX-1001, 11:65-12:3).)

A POSITA would, therefore, understand that to “constrain” the module, the module must be held in a fixed position without minor movement. (POR, 37-39.) Petitioner appears to take issue with this

PO's District Court Construction Of "Constrain"



C.D. Cal.

Plaintiff's Claim Construction Brief

- "Constrain" does not require a fixed position
- Electronics module could be moveable and removeable

23 such that a module is held in place, such as within a temple). As a result, it is clear that
24 constrain within the '174 patent does not require a fixed position. This becomes even
25 more apparent when claim language is read in context with the word "couple"
26 discussed above, which allows for various types of coupling, including moveable and
27 removeable coupling, indirect coupling, and electrical coupling.

(Exhibit 1026, 18)

PO's District Court Construction Of "Constrain"



C.D. Cal.

Plaintiff's Claim Construction Brief

- PO cited to the '174 Patent re "restraining force"

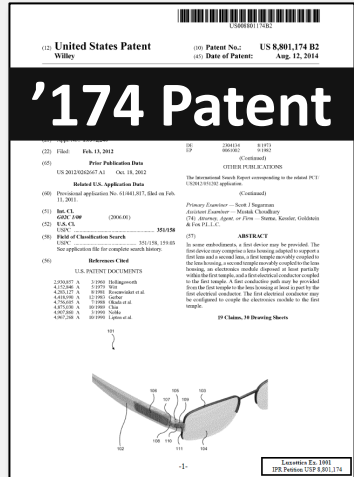
7 specification. Instead, the specification goes into great detail about different types of
8 forces and how they may apply when conductors are coupled, and how electronic
9 modules may be coupled to the temples. *Id.* at 10:40-11:08. For example, the
10 specification states that the first electrical connector "need not continually apply a
11 force," "but could apply a force when the module begins to move in a particular
12 direction—e.g. a restraining force—and thereby restrict the movement of the module
13 and thus couple the module to the temple." *Id.* at 10:61-67. In other words, nothing
14 requires a "restraining force," as used in the '174 patent, hold a module in a "fixed
15 position." Instead, it may only act in limited circumstances for certain types of
16 movement. And, again, as discussed above, "couple" is used extremely broadly in the
17 '174 patent, and includes any kind of physical contact, indirect connections, electrical
18 connections, removeable connections, and moveable connections. *E.g., id.* at 6:52-72.

(Exhibit 1026, 19)

PO's IPR Construction Contradicts The '174 Patent

'174 Patent

- The embodiment cited by PO ***permits movement***
 - Electrical conductor applies ***restraining force*** when modules moves



coupling the electronics module to the temple). The first electrical conductor need not continually apply a force to the electronics module or the components therein, but could apply a force when the electronics module begins to move in a particular direction—e.g. a restraining force—and thereby restrict the movement of the module and thus couple the module to the temple. In some instances, the electrical con-

(Ex. 1001, 10:61-67)

PO Attempts To Justify Deviating From The Ordinary Meaning



PTAB

Patent Owner's Sur-Reply

- PO cites to the '174 Patent re “substantially constrain”
 - Used to argue for ***narrow*** reading of “constrain” limitation

The parties’ dispute, therefore, appears to be limited to the level or degree to which the claimed electronics module must be constrained. (Reply, 7-8; POR, 37-39.)

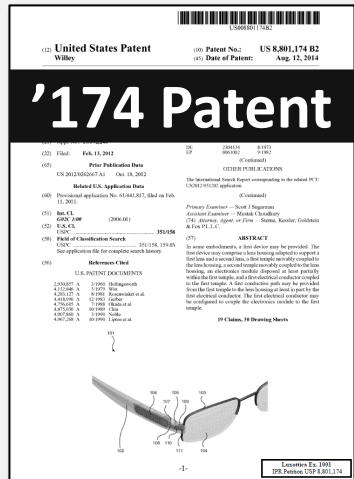
Patent Owner contends that the '174 patent explicitly distinguishes between “substantially constrain” and “constrain” and explains that substantial constraint allows for ““some minor movement of the electronics module within the temple.””

(POR, 37-38 (quoting EX-1001, 11:65-12:3)). A POSITA would, therefore, understand that to “constrain” the module, the module must be held in a fixed position without minor movement. (POR, 37-39.) Petitioner appears to take issue with this

PO's IPR Construction Contradicts The '174 Patent

'174 Patent

- Context of “substantially constrain” accounts for holding one end substantially in place



In some embodiments, the first electrical conductor may be configured to constrain or substantially constrain the electronics module. As used in this context, “constrain” may refer to when the first electrical conductor is configured to provide support (i.e. a restraining force) for the electronics module to retain the module in a fixed position within the temple. That is, the first electrical conductor may be configured to hold the electronics module in place. As noted above, the first electrical conductor may be integrally coupled to the temple (such as insert molded or otherwise affixed to the temple), and may be inserted through an opening of the electronics module and apply pressure to a surface or a component therein, which thereby restricts the module from being removed from the temple or moved within the temple. In this manner, the conductor may hold or restrain one end of the electronics module in place (or substantially in place). The term “substantially constrain” is used in this context to account for some minor movement of the electronics module within the temple, but

the conductor may generally hold the electronics module within the temple in place (such that it remains in an operative position).

(Ex. 1001, 11:50-12:3)

PO's IPR Construction Contradicts The '174 Patent

'174 Patent

- Embodiment permits minor movement of one end
- Electrical conductor prevents movement in a particular direction

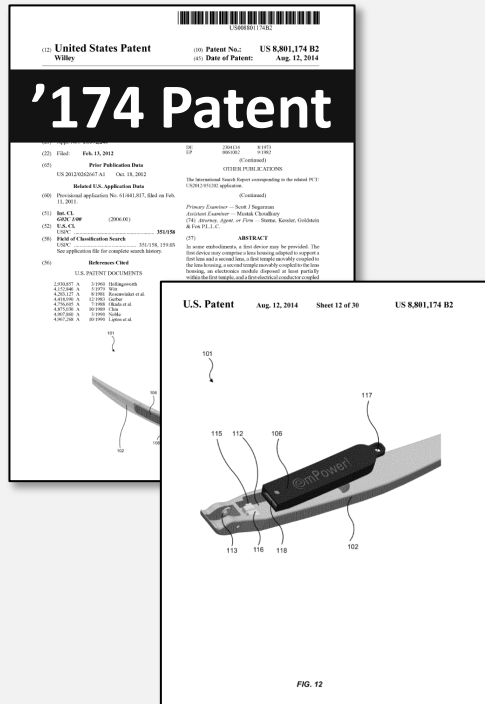


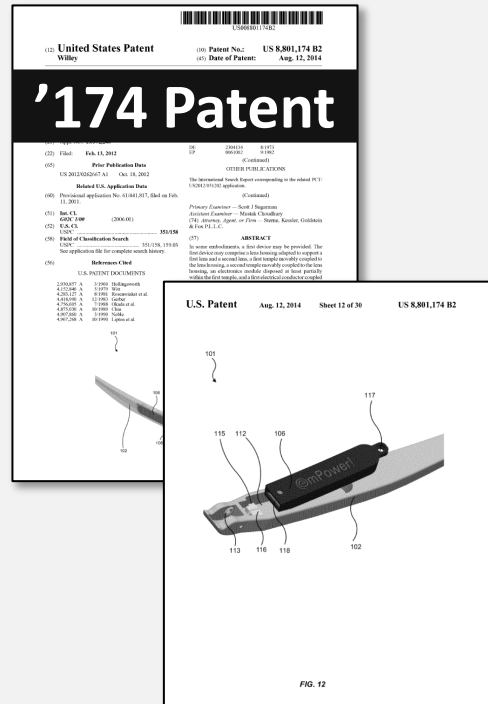
FIG. 12 shows a view of the inside surface (i.e. the surface that faces a wearer when the eyewear 101 is worn) of a portion of the temple 102 of the exemplary eyewear 101. . . . This may enable these portions of the **electrical conductors** to be inserted into the opening 118 of the electronics module 106 and **apply a force that restrains the electronics module 106 in the cavity 112 (i.e. holds the module in place and prevents the module from moving, particularly in a direction directly away from the frames).**

(Ex. 1001, 18:50–19:10)

PO's IPR Construction Contradicts The '174 Patent

'174 Patent

- Embodiment uses fastener to restrain moveable end



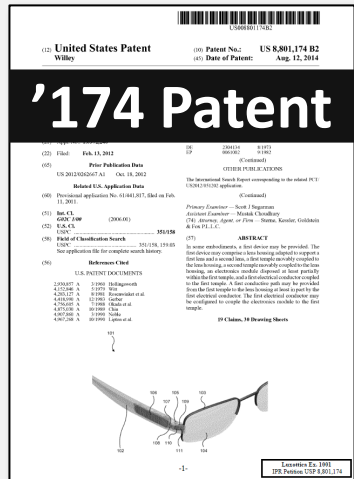
In this regard, the exemplary electronics module 106 shown in FIG. 12 includes a portion 117 comprising an opening in which ***a fastener may be inserted*** through ***to couple*** the one side of the electronics module 106 (i.e. ***the side opposite the one coupled*** by the portions 115 and 116 of the ***electrical conductors*** 107 and 108) to the temple 102.

(Ex. 1001, 18:50–19:10)

PO's IPR Construction Contradicts The '174 Patent

'174 Patent

- Embodiment uses removeable electronics module



In some embodiments, in the first device as described above, the electronics module may be configured to be removably coupled to the first temple. That is, in some embodiments, the first electrical conductor may constrain the electronics module when it is disposed within the temple such that, during normal use, the electronics module remains in place. However, the electronics module and/or the electrical conductor may be configured such that the module may also be removed from the temple without damaging the temple. This

(Ex. 1001, 13:41-49)

PO's IPR Construction Attempts To Import A Limitation



PTAB

- No basis for importing a limitation into the claims
 - No lexicography
 - No disavowal/disclaimer



The words of a claim are generally given their **ordinary and customary meaning** as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.Cir.2005) (en banc). There are only **two exceptions** to this general rule: 1) when a patentee sets out a definition and acts as his **own lexicographer**, or 2) when the **patentee disavows the full scope** of a claim term either in the specification or during prosecution.

Thorner v. Sony Computer Ent. Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012)

Petitioner Is Not Relying on Judicial Estoppel

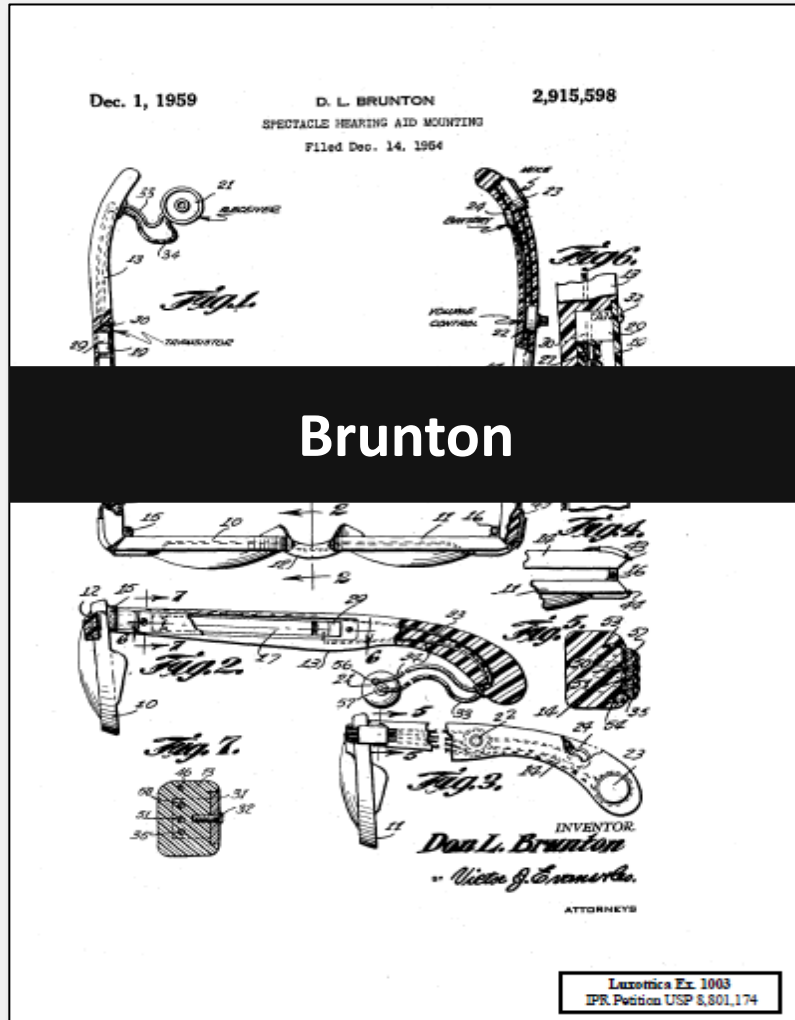
- In Sur-Reply, PO alleges Petitioner is asserting judicial estoppel
- Incorrect. PO's district ct. argument supports Petitioner's construction
 - PO cited and relied on the '174 patent in district court construction
 - PO ignored the same portions of the '174 patent in IPR construction

Grounds 1–2

Brunton

Brunton

U.S. Patent No. 2,915,598



■ Spectacles:

- **Hearing aid unit** – electronics module
- **Contact pins** – electrical conductors
- **Sockets in temple cavity** w/ tubular contacts

■ PO's only dispute: limitation 1[i]

- **...to constrain** the electronics module"

Brunton's Invention

■ The "***object of the invention***"

- ***Mount*** the hearing aid unit in temple with ***embedded sockets***
- Ensure the hearing aid unit ("casing with the elements") "***is continuously in a fixed or stationary position***"

5 Another important object of the invention is to provide means for mounting hearing aid elements in temples of a pair of spectacles wherein sockets for receiving hearing aid elements may or may not be embedded in material of the temples at the ends of cavities of the temples.

20 A further object of the invention is to provide means for mounting a hearing aid so that the device is particularly adapted for children in which the casing with the elements therein is continuously in a fixed or stationary position and is not constantly flapping against clothing or portions of the body.

(Ex. 1003, 2:1-5, 2:17-22)

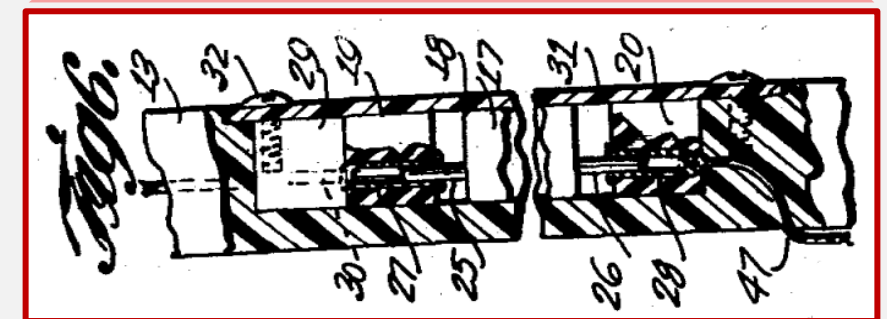
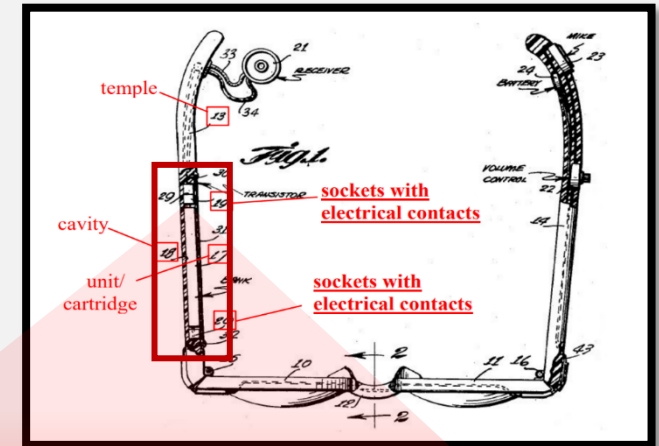
Brunton Fulfills These Objectives By Snapping Unit Into Sockets

- Hearing aid unit is ***"snapped"*** into sockets

55 With these and other objects and advantages in view,
the invention embodies a pair of spectacles having a lens
frame or front with temples hinged to ends thereof in
which elements of a hearing aid are removably mounted
in cavities in inner surfaces of the temples wherein con-
60 tacts of the elements are adapted to be snapped into
sockets installed or embedded in the temples and wherein
a user may purchase the entire hearing aid assembly or
any part thereof that may be desired.

Referring now to the drawing, wherein like reference
characters denote corresponding parts, the improved spec- 35
tacle hearing aid mounting of this invention includes a
lens frame having sections 10 and 11 connected by a
bridge 12 with temples 13 and 14 connected to ends of
the lens frame with hinges 15 and 16 and with a hearing
aid unit 17 positioned in a cavity 18 in the temple 13, 40
the unit being adapted to be snapped into sockets 19 and
20 and connected by suitable conductors to a receiver 21
at the end of the temple 13 and to a volume control 22,
a microphone 23 and a battery 24 in the temple 14.

(Ex. 1003, 2:59-61, 3:35-41)



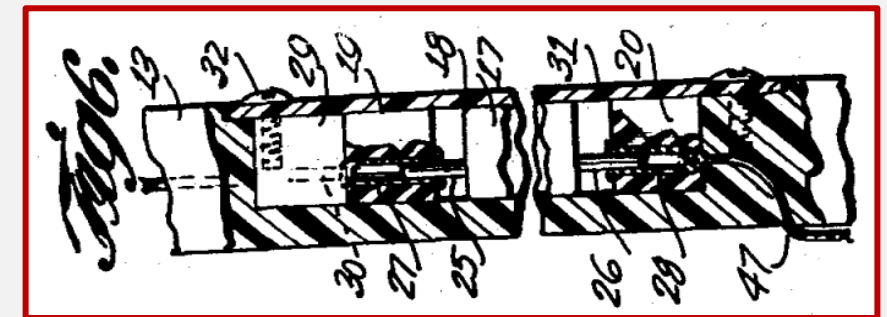
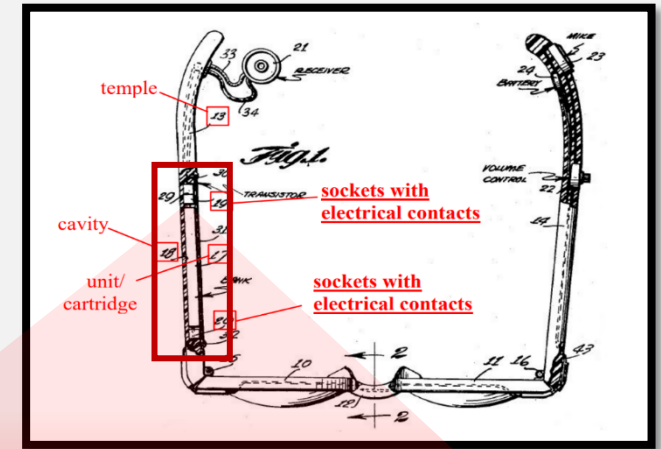
(Ex. 1003, Figs. 1, 6 (annotations added))

Brunton Satisfies "Constrain" Under Either Party's Construction

- The hearing aid unit includes "**contact pins**"
- Pins are "**inserted in tubular contacts**" in sockets
- Pins are "**frictionally retained**" in sockets

The ends of the unit 17 are provided with contact pins, such as the pins 25 and 26, and these pins are adapted to be inserted in tubular contacts, such as the contacts 27 and 28, in the sockets 19 and 20, respectively, as shown in Figure 6. It will be understood that the units may be provided with any suitable number of contact pins and the sockets provided with a corresponding number of tubular contacts that are positioned to receive the pins and in which the pins are frictionally retained.

(Ex. 1003, 3:57-65)



(Ex. 1003, Figs. 1, 6 (annotations added))

Brunton Satisfies “Constrain” Under Either Party’s Construction

“constrain”: to provide support (i.e. a restraining force) to retain the module in a fixed position within the temple

Ordinary meaning of “constrain”

- Petitioner has shown:
 - Brunton’s sockets provide a restraining force on the contact pins to retain (“***frictionally retain***”) the hearing aid unit in a fixed position within the temple

Ordinary meaning + “without minor movement”

- Petitioner has shown:
 - Brunton ***mounts*** the hearing aid unit in ***sockets*** so that it is “***continuously*** in a ***fixed or stationary position***”

The “Cover Plate” Is Not Constraining

- PO argues Brunton’s “cover plate” constrains the hearing aid unit
 - This is Brunton’s entire disclosure of the “cover plate” is one sentence:

may be desired. In the design shown, the temple is provided with a cover plate 31 that is secured in position over the unit 17 and the transistor 29 with screws 32. 75

(Ex. 1003, 3:76-4:1)

- PO admits that Brunton teaches merely “placing a cover plate over the entirety of the unit”

of its contact pins. Rather, Brunton teaches placing a cover plate over the entirety of the unit, transistor, and sockets, and screwing it into place. (EX-1003, 3:74-4:1, Fig. 1, Fig. 6.)

(Sur-Reply, 11)

Ground 4

Kokonaski-999 + Brunton

Motivation To Combine Kokonaski-999 and Brunton

- PO argues Petitioner did not address motivation to combine

On the second point, Petitioner fails to rebut the assertion that a POSITA would not have been motivated to modify Kokonaski-999 in view of Brunton to use electrical conductors to couple and constrain the module when Brunton more clearly teaches the use of a cover plate and screws to secure its components. (POR, 47.)

(Sur-Reply, 13)

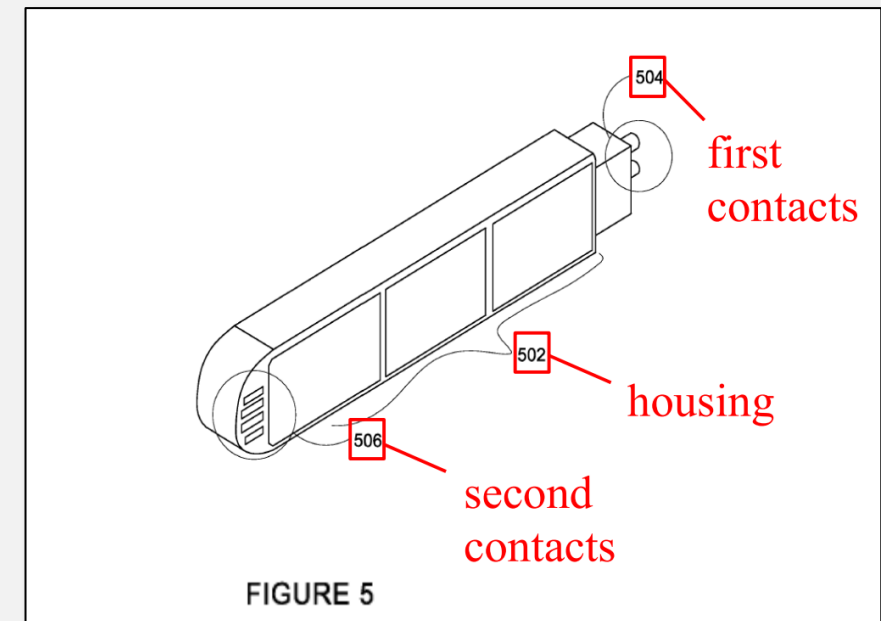
Motivation To Combine Kokonaski-999 and Brunton

- This argument fails because:
 - PO's lack of motivation argument is based on Brunton not satisfying the "constrain" limitation – which Petitioner did address
 - Petitioner provided detailed motivation analysis in the Petition

It would have been obvious to use sockets, as disclosed in Brunton, to "frictionally retain[]" the electronic module in Kokonaski-999's temple via at least the first contacts' pins 504. A POSITA would have been motivated to use sockets as part of the electrical conductors in Kokonaski-999's temples to constrain the electronic module.

First, a POSITA would have been motivated to use sockets, as disclosed in Brunton, to secure the electronic module in the temple and prevent it from inadvertently falling out. Ex.1002, ¶100. Kokonaski-999 discloses that "the

(Pet., 35)



(Ex. 1004, Fig. 5 (annotated))

Ground 5

Hattori

Hattori-913

JP No. S58-113913

EXHIBIT B

⑫ Japanese Unexamined Patent Application Publication (A)		⑪ Japanese Unexamined Patent Application Publication Number	
S58-113913			
⑤ Int.Cl. ³	Identification codes	JPO file number	④ Publication date July 7, 1983
G 02 C 11/02		7174-2H	
		Number of inventions: 1	
		Request for examination: Not yet requested	
(Total of 4 pages)			
⑤ Eyeglasses with display device		4-5-31 Minami Azabu, Minato-ku, Tokyo	
⑪ Japanese patent application		S56-210824	
⑫ Japanese patent application		December 26, 1981	
		⑦ Applicant: Ichiro Hattori	
		⑧ Agent: Tatemura Moriyama	

Hattori-913

Specification

1. Title of the Invention Eyeglasses with display device

2. Scope of the Patent Claims

(1) Eyeglasses with a display device, characterized by the fact that the display device is installed at any location of the eyeglass lens.

(2) Eyeglasses with a display device described in Paragraph 1 of the Scope of the Patent Claim, characterized by the liquid crystal display device being processed and formed within the eyeglass lens.

(3) Eyeglasses with a display device described in Paragraph 1 of the Scope of the Patent Claim, characterized in that a liquid crystal display panel is pasted on the eyeglass lens.

(4) Eyeglasses with a display device described in Paragraph 2 of the Scope of the Patent Claim, characterized in that the liquid crystal display device is processed and formed into a convex lens shape.

3. Detailed Description of the Invention

The present invention relates to eyeglasses with a display device equipped with a display device at any location on the eyeglass lens.

The object of the present invention is to provide a display device that displays time, date, animation, image information, etc. at any location of the eyeglass lenses, to make the eyeglasses have a multifunctional effect, and to establish a new market for fashionable eyeglasses. In addition, the other purpose is to provide eyeglasses with a display device with a structure that allows a person to check the contents of the above display even when wearing eyeglasses.

Traditionally, eyeglasses only function as vision correction and eye protection, and only improved the design of their lens or frame structure. On the other hand, technological advances in two-dimensional display devices using liquid crystal, etc., their drive devices, and their manufacturing methods have been exponentially developing in recent years. The present invention forms the display device described above in an eyeglass lens to give the eyeglasses versatility and fashionability. Specific embodiments of the invention will be described based on

- 67 -

■ Eyeglasses with display device

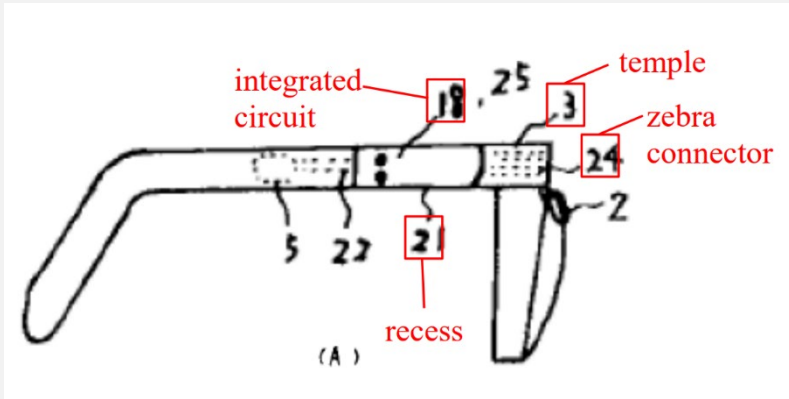
- **Integrated Circuit** – electronics module
- **Zebra Connector** – electrical conductors

■ PO disputes:

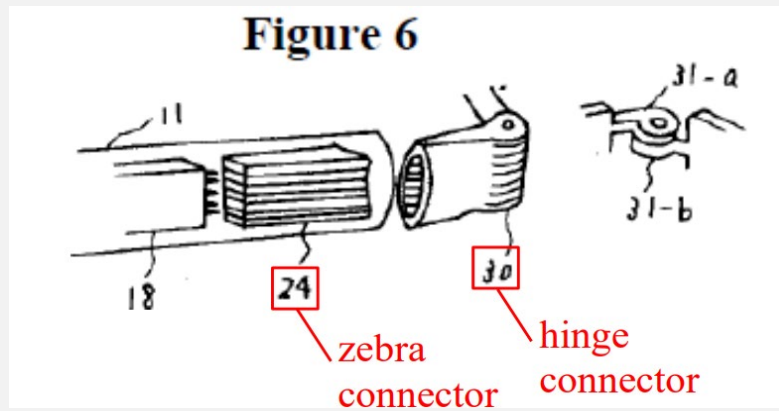
- 1[e]/[g]: conductors “***coupled to***” the temple
- 1[i]...”***to constrain*** the electronics module”

Hattori's Zebra Connector Is Coupled To The Temple

- Hattori:



(Ex. 1006, Fig. 4(A) (annotated))



(Ex. 1006, Fig. 6) (annotated)

- '174 Patent, "Coupled":

As used herein, "coupled" may refer to any manner of connecting two components together in any suitable manner, such as by way of example only: attaching (e.g. attached to a surface), disposing on, disposing within, disposing substantially within, embedding within, embedded substantially within, etc. "Coupled" may further comprise fixedly attaching two components (such as by using a screw or embedding a first component into a second component during a manufacturing process), but does not so require. Two components

(Ex. 1001, 6:52-60)

Hattori Discloses “Coupled To” Under Both Parties’ Translations

▪ Petitioner’s translation: “**embedded**”

semiconductor integrated circuit 18 incorporating individual electronic components 20 such as capacitors and transistors are embedded in recess 21 processed in temple 1, and its +1 power terminal 22 is connected to battery 4, while its output terminal group 23 is also connected to zebra connector 24 embedded in the temple. It is locked by a staked portion 26 on the semiconductor integrated circuit 18. Switch 27 is provided on protective plate 25 as necessary.

(Ex. 1006, 68) (annotated)

▪ PO’s translation: “**incorporated in**”

A semiconductor integrated circuit 18 incorporating a sub-component 20 is incorporated into a recess 21 machined in the temple 1, with its positive and negative power terminals 22 connected to a battery 4, while its output terminal group 23 is connected to a zebra-type connector 24 also incorporated in the temple. It is secured to the semiconductor integrated circuit 18 by a barb 26 thereon. A switch 27 is provided on the protective plate 25 as required. (Ex. 2019, 68) (annotated)

- PO attempts to re-translate its own translation of Hattori
 - PO ignores its own “incorporated in” translation
 - PO switches to alleging “mere placement” of the zebra connector

Hattori's Zebra Connector Constrains The Electronics Module

■ Petitioner's expert, Dr. Feland:

134. Due to its construction, a zebra connector can transmit multiple electrical signals while maintaining excellent electrical conductivity and providing mechanical stability. The DiSanto patent, issued in 1986, states:

145. The embedded zebra connector 24 is electrically and mechanically coupled to the integrated circuit 18 in the temple 3. The zebra connector is an elastomeric material that exerts pressure on the integrated circuit's output terminal group 23 by compressing against it, which creates a secure electrical connection and also physically couples the integrated circuit to the temple to retain it in a fixed position. See Ex. 1021, 6:50-53 (Zebra connectors "make reliable connections by

(Ex. 1002, ¶¶134, 145)

■ PO's expert. Dr. Oliver:

constrains an electronics module. I disagree. In my opinion, a POSITA would have understood an elastomeric material applying pressure to keep conductive parts in contact to disclose or teach a mechanism for *constraining an electronics module* as required by the claims and intrinsic record. All Petitioner's evidence shows is that

(Ex. 2016, ¶100)

■ Patent Owner's Response:

claims and Petitioner's own district court construction.⁴ All Petitioner's evidence shows is that Hattori-913's ZEBRA connector makes conductive parts touch and maintain contact. This does not disclose or render obvious *constraining* Hattori-

to restrain the integrated circuit. At best, Petitioner has merely shown that an elastomeric material (i.e., a flexible or rubber-like material) keeps conductors in contact.

(POR, 49-50, 52)

Hattori's Zebra Connector Constrains The Electronics Module

- Confirmed by DiSanto (U.S. Patent No. 4,598,960)

45 the associated aperture as 84 and 85. Placed within the aperture is a conductive coupling material sold by many companies and referred to in general as a Zebra strip. The trademark Zebra is a registered mark of Techknit Corporation of 129 Demody Street, Cranford, N.J.

50 Zebra connectors have alternating parallel layers of conductive carbon filled and non-conductive silicone rubber. They make reliable connections by exerting pressure between contacting surfaces. They come in various configurations with various conducting area

55 size and insulator width as well as different materials. An example of another company that sells such a material is Kollmorgen Company of 609 Rock Road, Redford, Va.

A Zebra strip essentially constitutes a plurality of

60 conductors which are each separated by a plurality of insulators, and, for example, a small cross section of a Zebra strip is shown in FIG. 6. As seen in FIG. 6, the

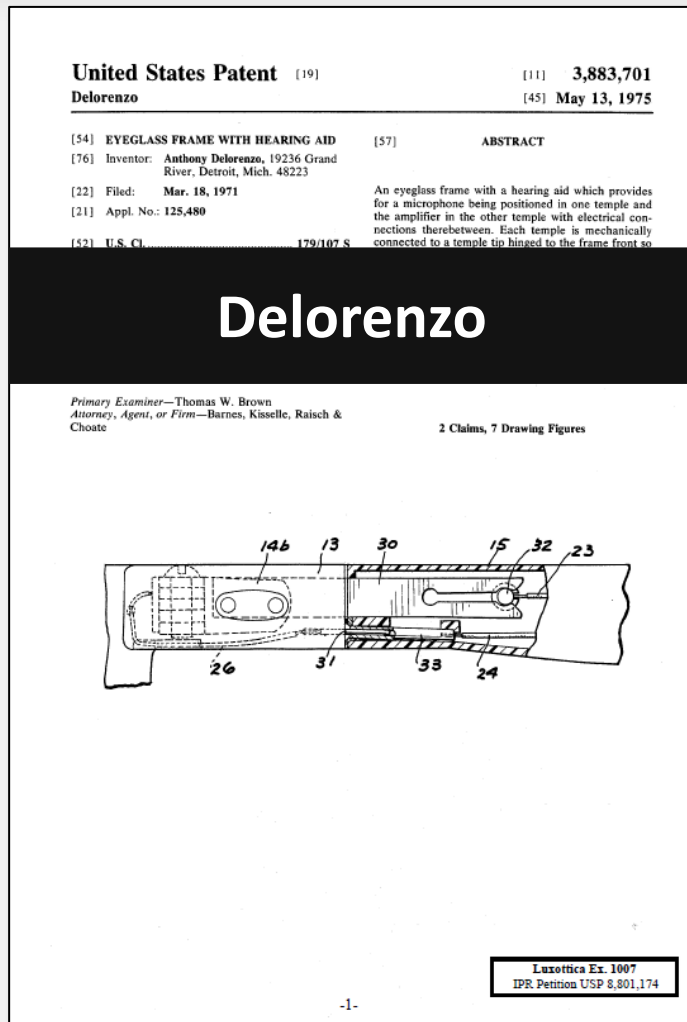
(Ex. 1021, 6:45-62)

Grounds 6–7

Delorenzo

Delorenzo

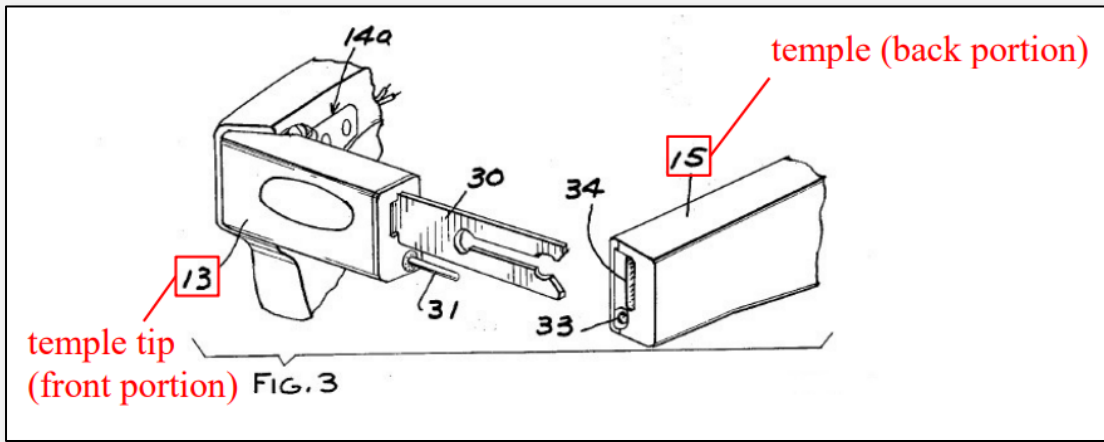
U.S. Patent No. 3,883,701



- **Eyeglasses frame with hearing aid**
 - **Temple 15 (electrical components)** – electronics module
 - **Bifurcated connector** – electrical conductors
- **PO disputes:**
 - 1[d]: electronics module disposed w/in temple
 - 1[i]..."**to constrain** the electronics module"

Delorenzo's Temple 15 Is The Claimed Electronics Module

■ Delorenzo



(Ex. 1007, Fig. 3 (annotated))

One of the temples 15a is provided with a microphone element 16 while the other has an amplifier element 17 removably embedded therein. A second microphone

(Ex. 1007, 2:9-11 (annotated))

■ Petitioner's expert, Dr. Feland:

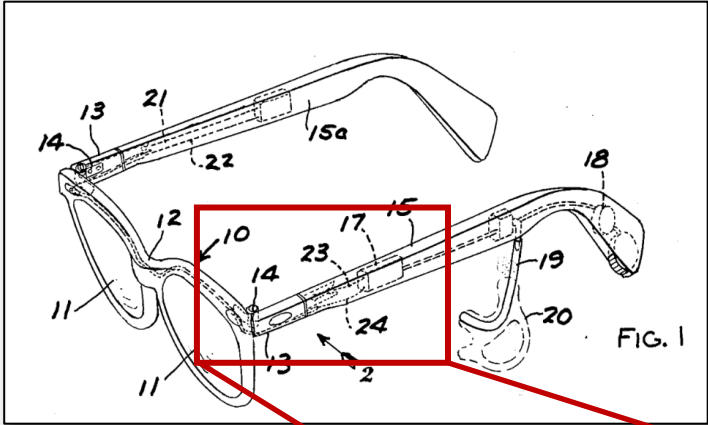
163. Furthermore, according to Delorenzo, “[o]ne of the temples 15a is provided with a microphone element 16 while the other has an amplifier element 17 removably embedded therein.” Ex. 1007, 2:9-11; *id.*, Abstract, 1:41-44, Fig. 1. Delorenzo’s temple 15 is thus an electronics module, which is disposed at least partially within the eyewear’s fully assembled temple (temple tip 13 and temple 15).

(Ex. 1002, ¶163 (annotated))

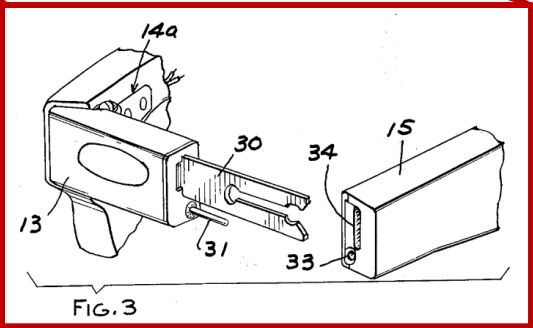
Delorenzo's Electronics Module Is At Least Partially Within the Temple

Claim 1

1[pre]	1. A first device, comprising:
1[a]	a lens housing adapted to support a first lens and a second lens;
1[b]	a first temple movably coupled to the lens housing;
1[c]	a second temple movably coupled to the lens housing;
1[d]	an electronics module disposed at least partially within the first temple;
1[e]	a first electrical conductor coupled to the first temple,
1[f]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and
1[g]	a second electrical conductor coupled to the first temple,
1[h]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;
1[i]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.



(Ex. 1007, Figs. 1, 3 (excerpt))



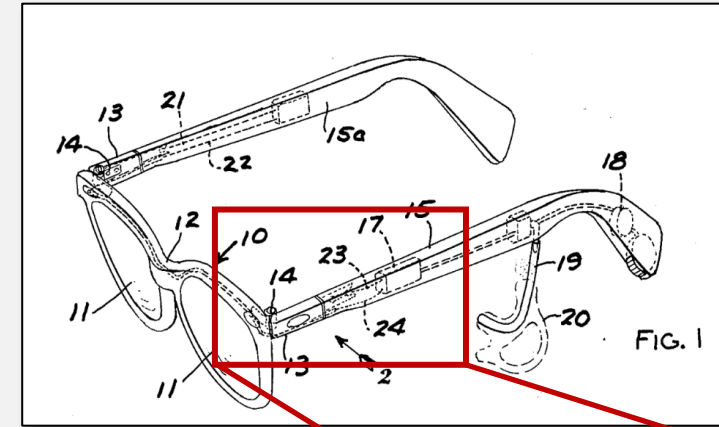
Delorenzo's Electronics Module Is At Least Partially Within the Temple

■ Institution Decision

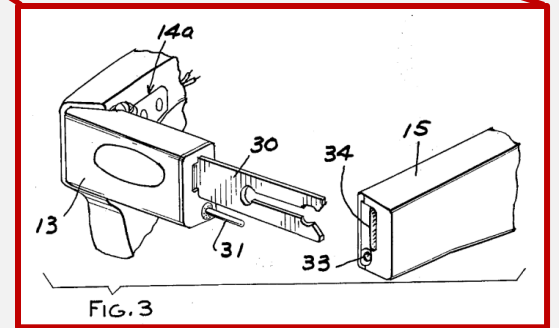
As noted above, Petitioner maps Delorenzo's temple 15 to both the recited temple and the recited electronics module. It is not clear to us how the electronics module (that is, *temple 15* per Petitioner's mapping) is disposed at least partially within the first temple (that is, *temple 15* per Petitioner's mapping). In other words, Petitioner's mapping appears to require temple 15 to be embedded within itself. It is not clear to us how this requirement is met.

(Institution Decision: Grant, 22)

- Claimed temple = temple tip 13 + temple 15 (electronics module)
 - Temple 15 is at least partially within the fully assembled temple (temple tip 13 + temple 15)



(Ex. 1007, Figs. 1, 3 (excerpt))

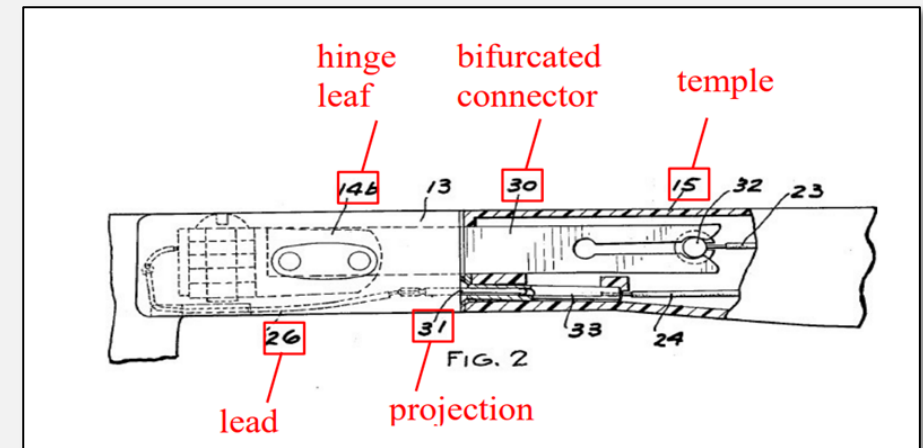
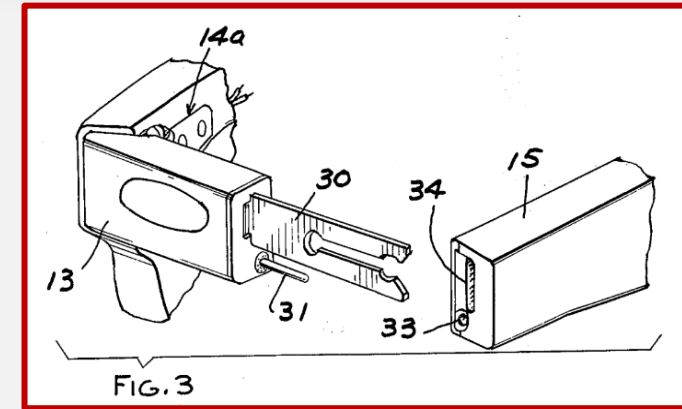


Delorenzo Discloses Conductors to Couple and Constrain

45 When the temple 15 is attached to the temple tip 13,
the bifurcated element 30 extends through passage 34
and mechanically connects onto post 32. This also provides an electrical connection between lead 23, the hinge 14 and wire 25 across the frame of the eyeglasses.
50 Attachment of temple 15 to temple tip 13 also establishes a connection between connectors 31, 33 providing an electrical connection between the wires 24, 26
across the frame to the corresponding wires in the other temple.

(Ex. 1007, 2:44-54) (annotated)

Dr. Feland (Ex. 1002, ¶172): "Delorenzo's electrical conductors at the front portion of the temple (temple tip 13) extend into and mechanically constrain the electronics module (temple 15) containing the electronic components."



(Ex. 1007, Fig. 2) (annotated)

Grounds 8-9

Independent Claim 15 of the '174 Patent

US008801174B2

(12) **United States Patent**
Willey

(10) **Patent No.:** **US 8,801,174 B2**
(45) **Date of Patent:** **Aug. 12, 2014**

'174 Patent

(21) Appl. No.: 13/072,240
(22) Filed: Feb. 13, 2012
(65) **Prior Publication Data**
US 2012/026267 A1 Oct. 18, 2012

Related U.S. Application Data
(60) Provisional application No. 61/441,817, filed on Feb. 11, 2011.

(51) **Int. Cl.**
G02C 1/00 (2006.01)
(52) **U.S. Cl.**
USPC 351/158

(58) **Field of Classification Search**
USPC 351/158, 159.03
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS

2,930,837 A	3/1960	Hollingsworth
4,152,846 A	5/1979	Witt
4,283,127 A	8/1981	Rosenzink et al.
4,418,990 A	12/1983	Gurber
4,756,605 A	1/1988	Okada et al.
4,875,030 A	10/1989	Chiu
4,907,860 A	3/1990	Noble
4,967,208 A	10/1990	Lipton et al.

FOREIGN PATENT DOCUMENTS

DE 2304134 8/1973
EP 0061082 9/1982

(Continued)

OTHER PUBLICATIONS

The International Search Report corresponding to the related PCT/US2012/051202 application.

(Continued)

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(57) **ABSTRACT**

In some embodiments, a first device may be provided. The first device may comprise a lens housing adapted to support a first lens and a second lens, a first temple movably coupled to the lens housing, a second temple movably coupled to the lens housing, an electronics module disposed at least partially within the first temple, a first electrical conductor coupled to the first temple, a first conductive path may be provided from the first temple to the lens housing at least in part by the first electrical conductor. The first electrical conductor may be configured to couple the electronics module to the first temple.

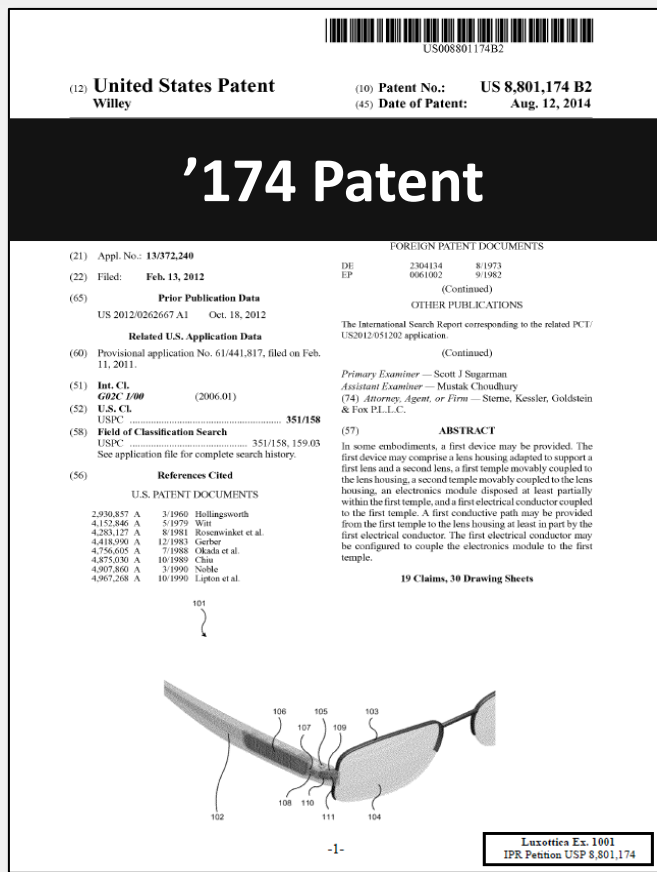
19 Claims, 30 Drawing Sheets

-1-

Luxottica Ex. 1001
IPR Penion USP 8,801,174

Claim 15	
15[pre]	15. A first method, comprising:
15[a]	providing a capacitive touch switch;
15[b]	disposing a plurality of electronic components on the capacitive switch; and
15[c]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.

No Dispute The Prior Art Discloses All Claim Limitations



Claim 15

15[pre]

15. A **first method**, comprising:

15[a]

providing a capacitive touch switch;

15[b]

disposing a plurality of electronic components on the capacitive switch; and

15[c]

coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.

15. A first method, comprising:

Prior Art In Grounds 8-9 Discloses The Method Of Claim 15



"A reference must be considered for everything that it teaches, not simply the described invention or a preferred embodiment."

In re Applied Materials, Inc., 692 F.3d 1289, 1298 (Fed. Cir. 2012).



""[A] reference must be considered not only for what it expressly teaches, but also for what it fairly suggests.'"

Bradium Techs. LLC v. Iancu, 923 F.3d 1032, 1049 (Fed. Cir. 2019) (quoting *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994))

Prior Art In Ground 8 Discloses The Method Of Claim 15

- **Ground 8: Kokonaski-999** and **Kokonaski-579** disclose methods
 - Kokonaski-999 discloses methods of manufacturing and assembling electroactive glasses. For example:
 - Ex. 1004, [0080]-[0085]: manufacturing by molding and machining components
 - Ex. 1004, [0047]: assembly of the electronics module
 - *See also*, Ex. 1004, [0026], [0039]-[0047]
 - Kokonaski-579 discloses similar method. Ex. 1012, 9, 12-14.

Prior Art In Ground 9 Discloses The Method Of Claim 15

- **Ground 9: Howell-596** and **Eichelberger** disclose methods
 - Howell-596 discloses its “invention can be implemented in numerous ways, including as a ... method.” Ex. 1015, [0009].
 - Ex. 1015, [0186]-[0206]: methods of assembling eyewear
 - Eicheleberger discloses fabrication and assembly methods. Ex. 1010, 1:35-36, 3:43-47.
 - Ex. 1010, 3:53-58: “allow[ing] electronic components...to be installed directly upon the appropriate portions of the double-sided printed circuit board.”

Ground 9

Ground 9: Clear Motivation To Combine References

▪ Claim 15: Howell-596 and Eichelberger

- PO argues no motivation to combine references
 - PO argues Howell-596's mechanical button switch is more reliable
 - Based on pure attorney argument; PO offers no expert testimony
- Petition provides motivation, supported by Dr. Feland's unrebutted testimony
 - Howell-596 already describes using a capacitive touch switch in its glasses

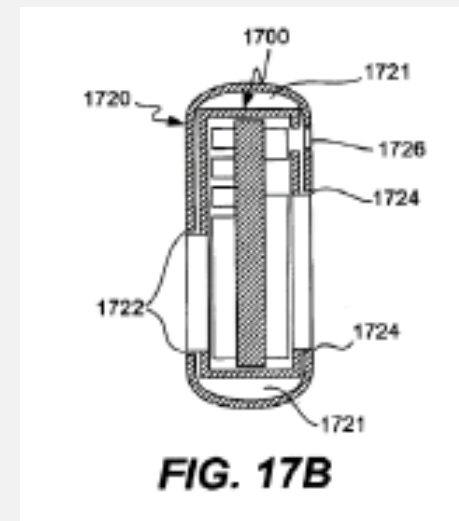
221. A POSITA would have been motivated to combine Howell-596 with Eichelberger because Howell-596 describes using a capacitive touch switch for controlling the UV detection system in its glasses. Furthermore, incorporating Eichelberger's capacitive touch switch into Howell-596's glasses would have involved nothing more than identifying a long-known example of the genus of switches (capacitive touch switches) which Howell-596 discloses and uses as a

(Ex. 1002, 221)

Ground 9: Clear Motivation To Combine References

▪ **Claim 16: Howell-596 and Eichelberger**

- PO argues no motivation to combine references
 - PO argues neither reference discloses “disposing the enclosure substantially within a temple of an eyeglass frame.”
- Howell-596’s module housing 1700 is positioned within eyewear housing 1720 in the temple
 - Module housing 1700 contains internal electronic components

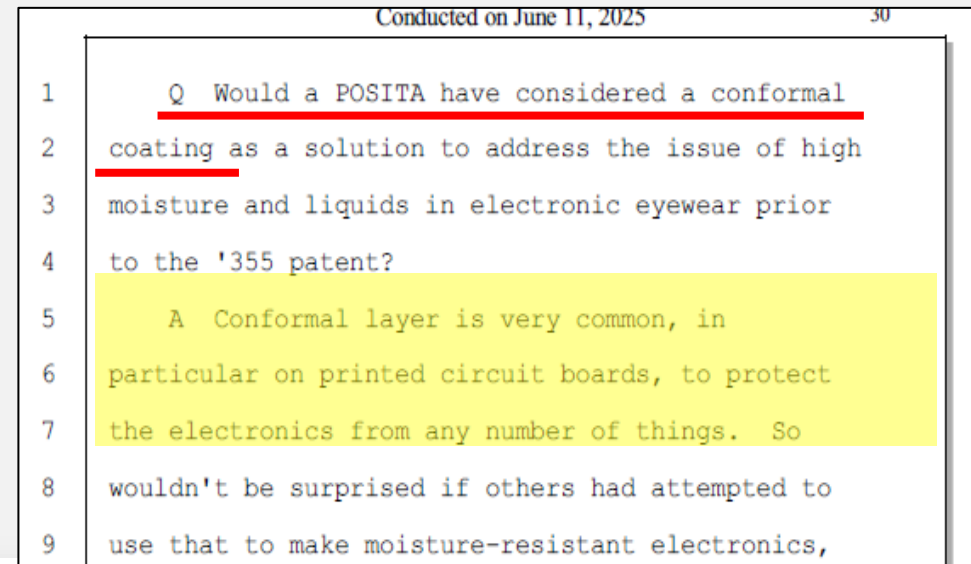


Ground 9: Clear Motivation To Combine References

■ Claim 18: Howell-596, Eichelberger, and Sikonowiz

- PO argues no motivation to apply Sikonowiz's conformal coating to eyewear
 - Pure attorney argument—no expert testimony
- Petition provides motivation, supported by Dr. Feland (Ex. 1002, ¶226)
 - Sikonowiz expressly motivates using conformal coating to prevent contaminants
 - Supported by testimony of Dr. Oliver, PO's expert:

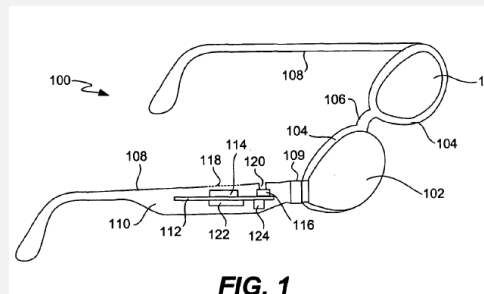
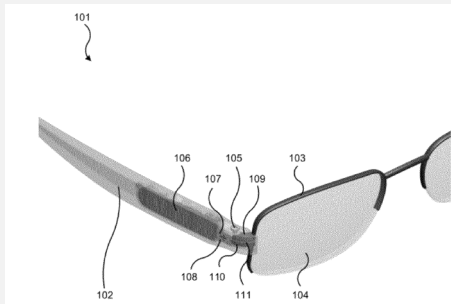
(Ex. 1029, 30:1-12)



Ground 9: Howell-596 Is Analogous Art

■ Claim 16: Howell-596 and Eichelberger

- PO argues Howell-596 is non-analogous to the '174 Patent
- Same field of endeavor
 - '174 Patent: Eyewear with electronic components – Ex. 1001, 1:19-22
 - Howell-596: Eyewear with integrated detection module – Ex. 1015, ¶¶[0007], [0181]-[0196]



- Reasonably pertinent to problems addressed in '174 Patent
 - Both directed to incorporation of electronics in eyewear