

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WANGS ALLIANCE CORPORATION D/B/A WAC LIGHTING CO.,
Petitioner,

v.

KONINKLIJKE PHILIPS N.V.,
Patent Owner.

Case IPR2015-01291
Patent 6,561,690 B2

Before GLENN J. PERRY, TREVOR M. JEFFERSON, and
MIRIAM L. QUINN, *Administrative Patent Judges*.

PERRY, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108

INTRODUCTION

Wangs Alliance Corporation d/b/a Wac Lighting Co. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1, 5, and 6 (the “challenged claims”) of U.S. Patent No. 6,561,690 B2 (Ex. 1001, “the ’690 Patent”). 35 U.S.C. § 311. Koninklijke Philips N.V. (“Patent Owner”) timely filed a Preliminary Response (Paper 6, “Prelim. Resp.”) contending that the petition should be denied as to all challenged claims.

We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Taking into account the arguments presented in the Petition and accompanying evidence and the Preliminary Response, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail in challenging claim 1 of the ’690 Patent as unpatentable under 35 U.S.C. § 102. We, therefore, grant the Petition and institute trial only as to claim 1.

Related Matters

Petitioner reports the following pending litigation matter related to the ’690 Patent: *Koninklijke Philips N.V. et al. v. Wangs Alliance Corporation*, Case No. 14-cv-12298-DJC (D. Mass.). Pet. 1.

Patent Owner indicates that it is suing the Petitioner and/or other parties under one or more of U.S. Patent Nos. 6,013,988; 6,147,458; 6,586,890 B2; 6,250,774 B1; 6,788,011 B2; 7,038,399 B2; 7,352,138 B2;

Case IPR2015-01291
Patent 6,561,690 B2

6,094,014; and 7,262,559 B2, all of which generally relate to light emitting diodes (“LEDs”). *Id.*

Petitioner reports filing additional petitions for *inter partes* review petitions challenging U.S. Patent Nos. 6,013,988; 6,147,458; 6,586,890 B2; 6,250,774 B1; 7,038,399 B2; and 7,352,138 B2. *Id.*

As of the date of this Decision, our records show the following *inter partes* reviews.

Case Number	Challenged Patent	Petitioner	Patent Owner
IPR2015-01287	6,013,988	Wangs Alliance Corporation	Koninklijke Philips N.V.
IPR2015-01289	6,147,458	Wangs Alliance Corporation	Koninklijke Philips N.V.
IPR2015-01290	6,250,774 B1	Wangs Alliance Corporation	Koninklijke Philips N.V.
IPR2015-01291	6,561,690 B2	Wangs Alliance Corporation	Koninklijke Philips N.V.
IPR2015-01292	6,561,690 B2	Wangs Alliance Corporation	Koninklijke Philips N.V.
IPR2015-01293	6,586,890 B2	Wangs Alliance Corporation	Philips Lighting North America Corporation
IPR2015-01294	7,038,399 B2	Wangs Alliance Corporation	Philips Lighting North America Corporation

THE '690 PATENT (Ex. 1001)

Described Invention

The '690 Patent states that light-emitting diodes (LEDs) are highly sensitive to mechanical manipulations, particularly during transport. Therefore components of an LED-based luminaire must be arranged

precisely relative to the LED light source to optimize the luminaire's light-emission capabilities and be secure during transport. Ex. 1001, 1:25–41. The '690 Patent purports to obviate this problem by providing a luminaire having a particular structure that is rugged to transport.

Patent Owner provides (Prelim. Resp. 3) the following annotated version of Figure 1 of the '690 Patent.

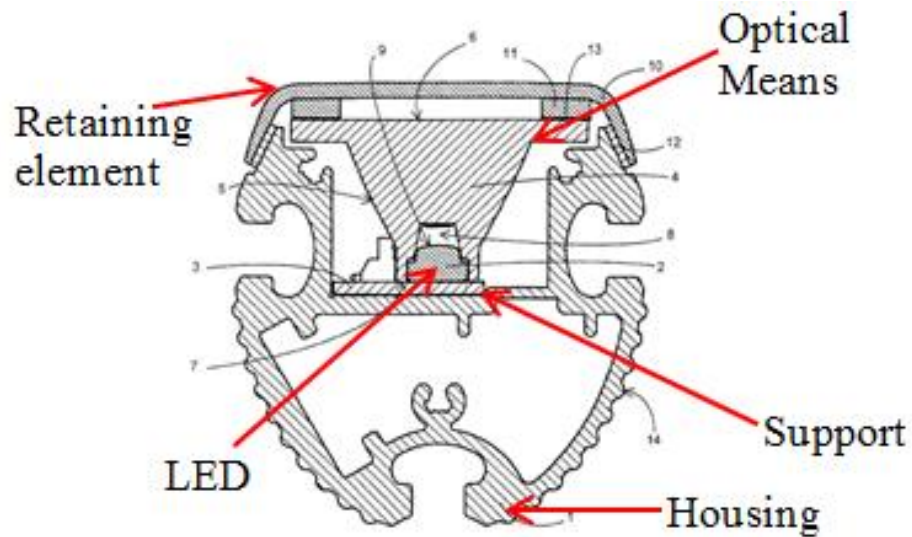


FIG. 1

Figure 1 is a cross-sectional view of an example of a luminaire. A housing of the luminaire defines an internal space containing at least one LED. In use, “optical means” (claimed “optical means for guiding”) guides light from the LED to the exterior of the housing. The LED is mounted to a support connected to the housing; and is held between a retaining element connected to the housing and the support. Ex. 1001, 1:48–51, Figure 1. The retaining element (e.g., elastic retention means) applies pressure to hold the optical means against the support. Ex. 1001, 2:5–14.

Illustrative Claim

Claim 1 of the '690 Patent is illustrative of the subject matter of the

challenged claims:

1. A luminaire comprising
a housing which defines an internal space containing at least one light source formed by a light-emitting diode (LED) and optical means for guiding the light emitted by the LED towards outside of the housing, characterized in that the LED is mounted to a support connected to the housing, and
the optical means is held between a retaining element connected to the housing and the support for the LED by pressure exerted by the retaining element and the support for the LED,
wherein the optical means has first and second ends, the first end being proximate the support connected to the housing and the second end being proximate the retaining element.

PETITIONER'S CHALLENGES

Petitioner asserts the following challenges (Pet. 3):

Reference	Basis	Claim(s) challenged
Yamakawa ¹	35 U.S.C. § 102	1, 5, and 6
Sharrah ²	35 U.S.C. § 102	1
Yamakawa II ³	35 U.S.C. § 102	1 and 5
Yamakawa II	35 U.S.C. § 103	6

Petitioner relies on the testimony (Declaration) of Eric Bretschneider,

¹ U.S. Patent 4,978,843, issued December 18, 1990 (Ex. 1003, "Yamakawa").

² U.S. Patent 5,871,272, issued February 16, 1999 (Ex. 1004, "Sharrah").

³ U.S. Patent 5,173, 810, issued December 22, 1992 (Ex. 1006, "Yamakawa II").

Ph.D. Ex. 1007.

CLAIM CONSTRUCTION

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015) (stating that “Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation”) *reh’g en banc denied*, 2015 WL 4100060 (Fed. Cir. July 8, 2015). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

The parties propose the following claim constructions:

Term	Petitioner’s Proposed Construction	Patent Owner’s Proposed Construction
“optical means for guiding the light emitted by the LED towards outside [of] the housing,”	“collimator” Pet. 4–5. Ex. 1001, 3:24–32.	Function: “guiding the light emitted by the LED towards outside of the housing.” Corresponding structure: “collimator with a symmetrical lateral surface.” Prelim. Resp. 4, 12.

“luminaire”	“a lighting unit consisting of one or more electric lamps with all of the necessary parts and wiring.” Pet. 12–13, 20, 27.	Preamble term that breathes life and meaning into the claim. Prelim. Resp. 5; construe as “a light source that is configured to illuminate an object or surface.”
“retaining element”	“a structure that fixes the position of another element.” Pet. 5.	Does not dispute Pet. 5; Construction. Prelim. Resp. 15.

For purposes of this decision, we find it necessary to construe only “optical means for guiding the light emitted by the LED towards outside [of] the housing.” The parties agree that “optical means for guiding the light emitted by the LED towards outside [of] the housing,” should be construed as a “means-plus-function” clause. Pet. 4–5, Prelim. Resp. 11–15. They also agree that the specification-described structure associated with the function performed by this claim term is a collimator 4 shown in Figure 1. *Id.*

Petitioner would have us construe the term as “a collimator” (without specifying any particular shape). Patent Owner contends that we should construe the term as requiring a symmetrical lateral surface. *Id.* Patent Owner provides an annotated version of Figure 1 of the ’690 Patent, reproduced below, in support of its construction position.

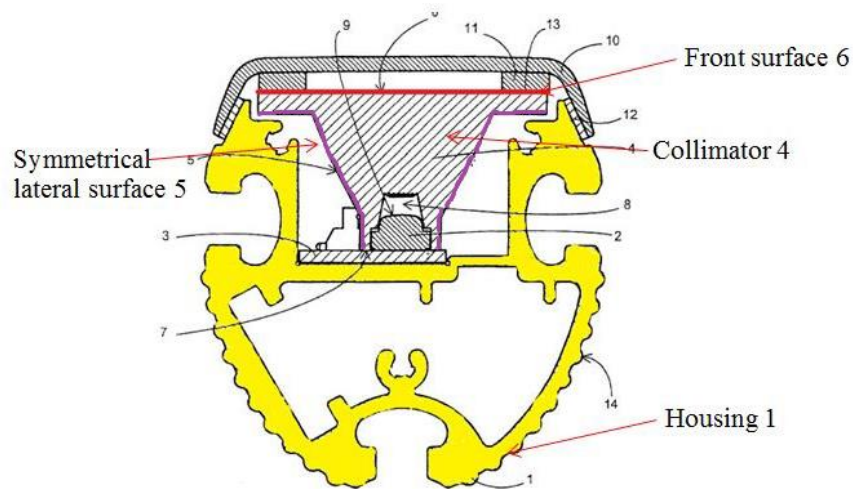


FIG. 1

Prelim. Resp. 12. Patent Owner notes the following description from the Specification:

The lateral surface 5 of the collimator 4 causes the light emitted by the LED 2 to be concentrated into a beam. The beam obtained here is a directional light beam consisting of parallel rays. This light beam leaves the collimator 4 by the front surface 6 and the direction of said beam is perpendicular to the plane defined by this front surface 6.

Ex. 1001, 3:24–40 (emphasis added).

For purposes of this decision, we are not persuaded to construe this term as narrowly as Patent Owner proffers. We find no discussion in the '690 Patent describing the virtues of any particular collimator shape over another even though the only one described (at least by the drawings) has a generally cone-like shape. There is no evidence that a different shape could not perform the agreed-upon function. Nor is there any evidence that a different shape would prevent the collimator from being held in place by pressure from other structures. The scope of a means plus function claim term includes not only the specific structures described in the specification

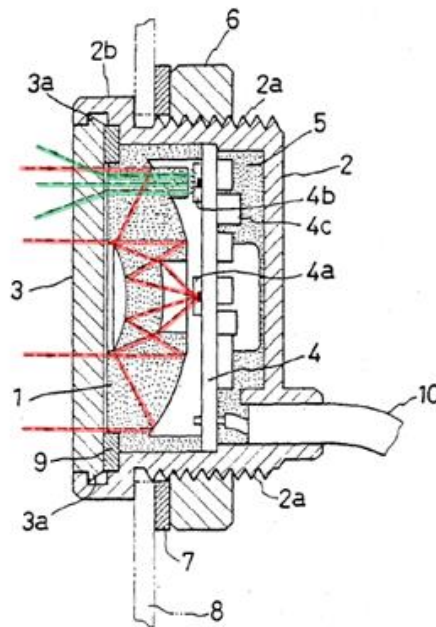
but also equivalents. Therefore, for purposes of this decision, we adopt Petitioner's construction.

PRIOR ART CHALLENGES

We turn now to Petitioner's asserted grounds of unpatentability and Patent Owner's arguments in its preliminary response to determine whether Petitioner has met the threshold standard of 35 U.S.C. § 314(a).

Challenges Relying on Yamakawa

Petitioner contends that claims 1, 5, and 6 are anticipated by Yamakawa under 35 U.S.C. § 102, relying on the supporting testimony of Dr. Bretschneider (Ex. 1007). Pet. 12–20. Patent Owner disagrees (Prelim. Resp. 16–29) and provides an annotated version of Yamakawa Figure 1 (*Id.* at 24) which is reproduced below.



Yamakawa provides a photoelectric sensor having a folded light path. Ex. 1003, [54]. It includes transparent resinous optical body 1, circuit block 4, and a tubular casing for incorporating therein the optical body and the circuit

block. A signal light incoming through transparent protector 3 of the casing is reflected by a first reflective mirror of the optical body. Following this first reflection, a second reflective mirror reflects the signal light. The incoming light is then focused by a collecting lens onto a photoelectric converting element 4a which outputs a corresponding electric signal. Ex. 1003, 3:25–4:56.

LED indicating light 4b is located within the optical body. Petitioner notes that the optical body is designed to “radiate a luminous flux of the operation indicating lamp 4b through the objective surface” of the optical body. Pet. 9 (citing Ex. 1003, 4:19–28; Ex. 1007 ¶ 24).

Patent Owner argues that Yamakawa does not disclose “optical means for guiding the light emitted by the LED towards outside of the housing.” Prelim. Resp. 21–25. The essence of Patent Owner’s argument is that outgoing light produced by the Yamakawa LED is not guided by a collimator. It simply radiates.

Incoming light (red color in the diagram above) is refracted and focused on element 4a. However, outgoing light (green color in the diagram above), from LED 4b simply radiates without being guided by a collimator. In view of this missing claim limitation, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing in establishing that claims 1, 5, and 6 are anticipated by Yamakawa.

Challenges Relying on Sharrah

Petitioner contends that claim 1 is anticipated by Sharrah under 35 U.S.C. § 102, relying on the supporting testimony of Dr. Bretschneider (Ex. 1007). Pet. 20–27.

Sharrah describes a flashlight having a rotatable lamp head. Ex. 1004, Abstract. Patent Owner provides (Prelim. Resp. 30) the following annotated version of the upper portion of Sharrah Figure 11.

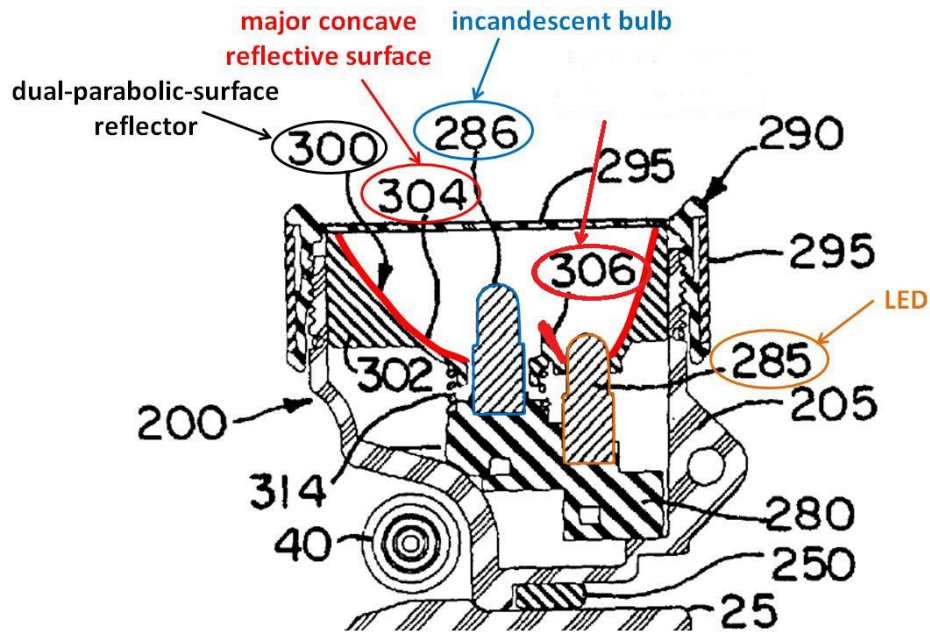


Figure 11 is a cross-sectional view of a flashlight including an incandescent bulb 286 and an LED 285. Sharrah Figure 13 is reproduced below.

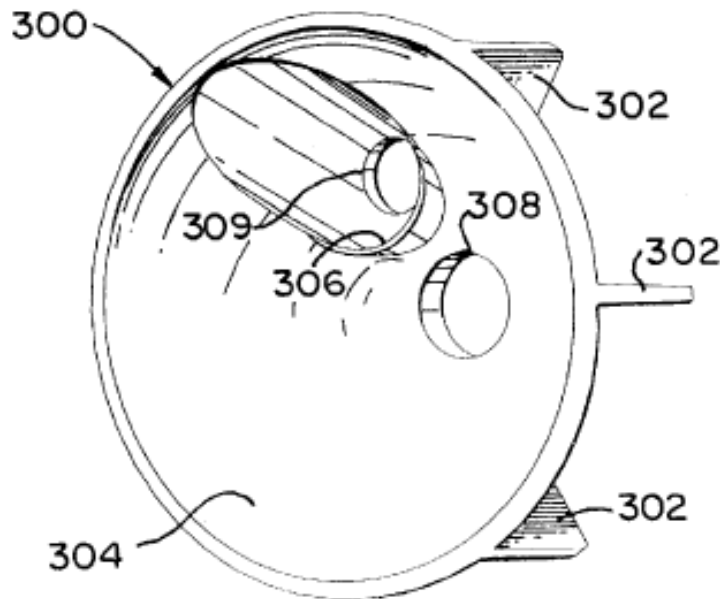


FIG. 13

Figure 13 is a perspective view of the flashlight portion shown in Figure 11.

Patent Owner argues (Prelim. Resp. 32–36) that Sharrah does not disclose “optical means for guiding the light emitted by the LED towards outside the housing” because the Petition fails to address the precise function of the collimator. Given our construction of “optical means for guiding the light emitted by the LED towards outside [of] the housing,” we are not persuaded by Patent Owner’s argument. Sharrah’s parabolic reflector collimates, at least to some degree, light emanating from LED 285.

Patent Owner also contends that Sharrah does not disclose optical means “held between a retaining element . . . and the support . . . by pressure exerted by the retaining element and the support for the LED.” Prelim. Resp. 36–37. Patent Owner notes that the Sharrah’s reflector 300 is designed to move relative to the lamp elements 285, 286. *Id.* at 36 (citing Ex. 1004, 3:13–15).

This structural arrangement, according to Patent Owner, is inconsistent with a major benefit of the '690 Patent invention which is to prevent relative movements of the optical means with respect to the support of the LED. *Id.* at 36 (citing Ex. 1001, 1:61–66).

Sharrah Figure 1 is reproduced below.

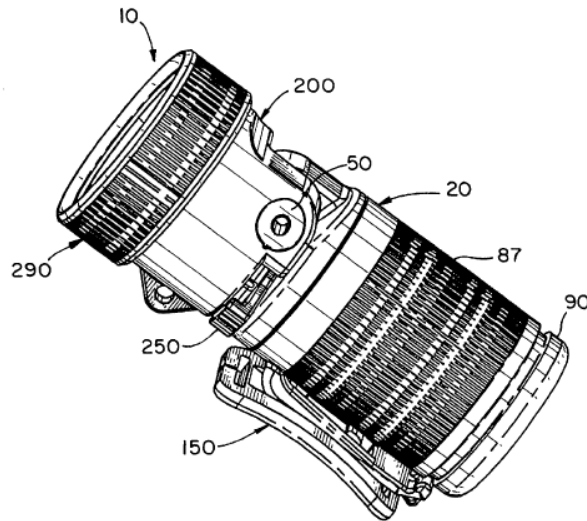


FIG. 1

Figure 1 is a perspective view showing the external structures of the flashlight. Focusing ring 290 engages with threading on the end of the lamp head housing. It allows a user to adjust the position of reflector 300 relative to incandescent bulb 286 and LED 285. Ex. 1004, 3:6–17. Sharrah explains that “[a] coil spring 314 [(see Figure 1, above)] disposed between the lamp socket 280 and reflector 300 in coaxial relationship with the incandescent lamp element 286 biases the reflector away from the lamp socket so that the reflector is urged into contact with the focusing ring 290.” *Id.* at 3:9–13. To function properly, the Sharrah device requires reflector 300 to be movable—“rotation of the focusing ring 290 displaces the reflector 300 relative to the lamp elements 285, 286.” *Id.* at 3:13–15. The base of reflector 300 rests

against spring 314. As focusing ring 290 is adjusted, reflector 300 moves closer or further from socket 280, displacing reflector 300 relative to lamps 285 and 286.

Patent Owner draws the conclusion that because the focusing ring and accompanying structures permit relative movement, that the claim limitation is not met. We disagree.

Even while the focusing ring is being manipulated to cause relative movement, coil spring 314 still exerts pressure (even while expanding or contracting). A user's manipulation of focusing ring 290 moves the relative positions of the reflector and lamp elements from one steady state position to another, each having pressure applied by coil spring 314 working against a fixed surface (albeit the fixed surface may be in a different position after adjustment of the focusing ring). Therefore, we are unpersuaded by Patent Owner's argument.

According, we determine that that Petitioner has shown a reasonable likelihood that it will prevail in establishing that claim 1 is anticipated by Sharrah.

Challenges Relying on Yamakawa II

Petitioner contends that claims 1 and 5 are anticipated by Yamakawa II under 35 U.S.C. § 102, relying on the supporting testimony of Eric Bretschneider, Ph.D. (Ex. 1007). Pet. 27–34. Yamakawa II Figure 1 is reproduced below.

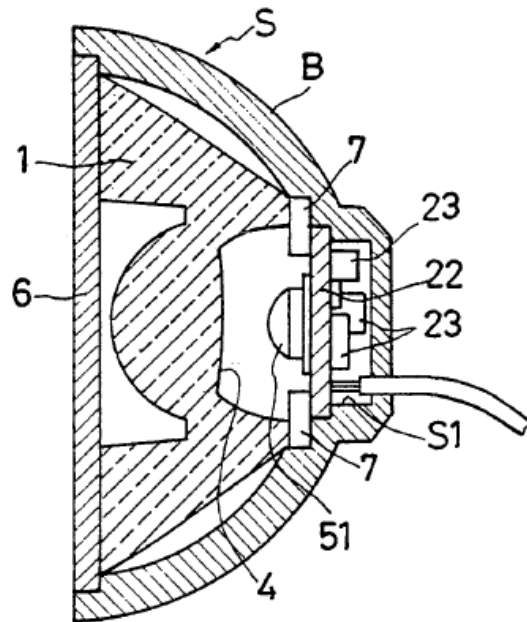


Figure 1 is a cut-away view of an embodiment of a light transmitting lens. Ex. 1006, 2:42–43. Photoelectric sensor S comprises light transmitting lens 1 disposed in casing B via panel 6 and spacers 7. The interior surface of casing B is hemispherical, casing B is black plastic, and panel 6 is transparent. Light emitting diode 51 is disposed on wiring substrate 22, preferably in the center of space 4. Light transmitting lens 1 is structured such that outer surface 5 is a conical section having a parabolic or elliptical shape. Light transmitting lens 1 includes a hemispherical convex lens 3 disposed in tubular concave surface 2. Light transmitting lens 1 includes space 4 defined from spherical surface 4a, the center of which preferably corresponds to the location of light emitting diode 51. The centers of convex lens 3 and space 4 are aligned with each other along the longitudinal axis of the conical section defining surface 5. Light transmitting lens 1 is preferably made of transparent plastic material, e.g., acrylic resin, unifying

the various parts. The light emitting diode, located in the center of space 4, emits light rays into convex lens 3 and off surface 5. *Id.* at 2:68–3:30.

Claim 1 requires that “the optical means is held between a retaining element connected to the housing and the support for the LED by pressure exerted by the retaining element and the support for the LED.” Pet. 31. Petitioner contends, supported by the testimony of Dr. Bretschneider, that the claimed “pressure” is inherent in Yamakawa II because of the presence of spacers 7. Pet. 31–32. Dr. Bretschneider states that “[i]t was well known in the art that spacers are used to reduce distance between objects[, where distance is undesirable,] and helps increase pressure on an object to keep it in place.” Ex. 1007 ¶ 93.

Patent Owner disagrees (Prelim. Resp. 39–40) arguing that Yamakawa II does not suggest that the spacers exert pressure for any purpose, let alone for the purpose of holding lens 1.

We note Dr. Bretschneider’s testimony that it was known to use spacers to control distance between objects, where distance is undesirable. Ex. 1007 ¶ 93. He also states that it was known to use spacers to help increase pressure on an object to keep it in place. *Id.* Thus, Dr. Bretschneider has identified two uses of spacers. *Id.* We are persuaded by Patent Owner’s argument that the mere presence of spaces does not imply that they are there for the purpose of applying pressure. Pressure would be applied only if the spacers were sized such that they would be force fit into place in a manner that would apply pressure to the elements against which they were forced. Accordingly, we are persuaded by Patent Owner’s argument that this claim limitation is not met by Yamakawa II.

Petitioner contends that dependent claim 6 would have been obvious based on Yamakawa II under 35 U.S.C. § 103, relying on the supporting testimony of Dr. Bretschneider (Ex. 1007). Pet. 34–35.

Claim 6 adds a limitation requiring one end of the optical means to be in contact with the support connected to the housing. Petitioner’s argument does not overcome the deficiencies of Yamakawa II discussed above with respect to alleged anticipation.

Dr. Bretschneider opines that the spacers are small components placed between the wiring substrate and the optical means to apply pressure to the optical means. Pet. 34 (citing Ex. 1007 ¶ 100). There is no explanation as to why Dr. Bretschneider reaches the conclusion that the spacers are provided for the purpose of applying pressure, rather than to simply prevent loosely fitting parts from falling out, by restraining them in a smaller space. Further, according to Dr. Bretschneider, the placement of spacers was a design choice and a PHOSITA would have just as likely placed spacers between the lens and the plate (*Id.* at 35 (citing Ex. 1007 ¶ 101)) and the placement of spacers would have been one of only a limited number of options facing a PHOSITA (*Id.* (citing Ex. 1007 ¶ 103)). Thus, concludes Dr. Bretschneider, that the added limitation in claim 6 is nothing more than the recitation of known elements, used in a known fashion, and producing expected results. (*Id.* citing Ex. 1007 ¶ 104).

In essence, Petitioner argues that an alternative structure (different placement of spacers) to Yamakawa II would be obvious from Yamakawa II; and that alternative structure would render the claim 6 structure obvious. That argument is not persuasive because we find the explanations of Dr.

Bretschneider lacking in logic and factual support. The alleged alternative is more than a mere exercise of a known design alternative, of which we are not persuaded. We find that the present record presents insufficient motivation to modify Yamakawa II as alleged by Petitioner.

CONCLUSION

Taking into account the arguments presented in the Petition and in Patent Owner's Preliminary Response, along with all of the evidence relied upon by both parties, we conclude that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner will prevail in challenging only claim 1 of the '690 Patent based on Sharrah. Petitioner has not established a reasonable likelihood of prevailing in its challenges to claims 1, 5, and 6 based on Yamakawa or Yamakawa II.

ORDER

For the reasons given, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, an *inter partes* review of the '690 Patent is instituted on the following ground: Claim 1 as anticipated by Sharrah under 35 U.S.C. § 102;

FURTHER ORDERED that we institute *inter partes* review on no other ground other than that specifically noted above; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of a trial on the grounds of unpatentability authorized above; the trial commences on the entry date of this decision.

Case IPR2015-01291
Patent 6,561,690 B2

PETITIONER:

David Radulescu
Angela Chao
RADULESCU LLP
david@radulesculp.com
angela@radulesculp.com

PATENT OWNER:

Denise W. DeFranco
C. Brandon Rash
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP
denise.defranco@finnegan.com
brandon.rash@finnegan.com