

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

SIGNIFY NORTH AMERICA CORPORATION
and SIGNIFY HOLDING B.V.,

Plaintiffs,

v.

MENARD, INC.,

Defendant, Third-Party Plaintiff

v.

LUMINEX INTERNATIONAL COMPANY,
LTD.; RICHPOWER INDUSTRIES, INC.; EAST
WEST COMMERCE CO., INC.; ALERT REEL
MANUFACTURING, LLC; BEST LIGHTING
PRODUCTS, INC.; K LIVE D/B/A BULB STAR;
CL CORPORATION D/B/A PINEGREEN
LIGHTING; GOOD EARTH LIGHTING, INC.;
GT INDUSTRIAL PRODUCTS, L.L.C.;
SOARING TECHNOLOGY CO., LTD; ZONE
INDUSTRY CORPORATION; CANARM, LTD.,
TEST RITE PRODUCT CORPORATION.

Third-Party Defendants.

Case No: 3:22-cv-00706-jdp

District Judge: James D. Peterson

Magistrate Judge: Stephen L. Crocker

**DEFENDANT’S AND THE THIRD PARTY DEFENDANTS’ JOINT INITIAL
INVALIDITY CONTENTIONS**

Defendant Menard, Inc. (“Defendant” or “Menard”), and Third-Party Defendants Luminex International Company, Ltd.; Richpower Industries, Inc.; Alert Reel Manufacturing, LLC; Best Lighting Products, Inc.; CL Corporation d/b/a Pinegreen Lighting; Good Earth Lighting, Inc.; GT Industrial Products, L.L.C.; Zone Industry Corporation; and Test-Rite Products Corp. (collectively, “Third-Party Defendants”) make these Invalidity Contentions concerning U.S. Patent Nos. 7,038,399 (“’399 patent”); 7,256,554 (“’554 patent”); 7,737,643 (“’643 patent”); 7,348,604 (“’604

patent”); 7,658,506 (“506 patent”); and 10,299,336 (“336 patent”) (collectively, “Asserted Patents”). The Joint Initial Invalidity Contentions include this document, all exhibits to it, and all documents referenced or described in this document or its exhibits.

These Joint Invalidity Contentions reflect Defendant’s and the Third Party Defendants’ knowledge as of now. Defendant and the Third Party Defendants may modify or supplement these Joint Invalidity Contentions in response to learning of additional prior art or information regarding prior art, any modification or supplementation of Infringement Contentions by Signify, any claim construction by the Court, any positions that Signify or its expert witness may assert concerning claim construction, infringement, or invalidity, or as otherwise may be appropriate. Moreover, Defendant’s and the Third Party Defendants’ investigation of facts and prior art is ongoing.

Signify’s infringement allegations are deficient at least insofar as they fail to articulate and produce claim charts specific to those products manufactured by each Third-Party Defendant. Defendant and the Third Party Defendants reserve the right to modify or supplement these Joint Invalidity Contentions in response to changes in Signify’s Infringement Contentions and positions.

These Invalidity Contentions describe particular teachings and disclosures of the prior art as applied to features of the asserted claims. However, persons having ordinary skill in the art generally may view an item of prior art as a whole and in the context of other publications, literature, products, and understanding, and the cited portions of prior art are exemplary only. Thus, to understand and interpret any specific statement or disclosure within a prior art reference, such persons may rely on other information within the reference, along with other publications and their general scientific knowledge. Defendant and the Third Party Defendants may rely on the entirety of the listed references, including uncited portions of those references, references incorporated by reference, and on other publications and expert testimony shedding light on those references,

including to aid in understanding and interpreting the cited portions, to provide context, and to provide additional evidence that the prior art discloses a claim limitation or that it was readily known to a person of ordinary skill in the art.

Defendant and the Third Party Defendants may also rely on discovery obtained in this matter, from Signify and from third parties, including testimony from named inventors, prior art authors and/or inventors, expert witnesses, and other witnesses with relevant knowledge, as well as papers filed and any evidence submitted by Signify in conjunction with this litigation. Defendant and the Third Party Defendants may rely on such discovery for any purpose, including without limitation as prior art, to describe the prior art or its invalidating features identified in these Joint Invalidity Contentions; to provide evidence of the state of the art in the relevant time period (whether or not this evidence itself qualifies as prior art); and to establish bases for and motivations to make combinations of cited references to render the asserted claims obvious. At this point in the litigation, Signify has not yet produced to Defendant or the Third Party Defendants any prior art for any of the Asserted Patents. Indeed, in view of the licensing programs and prior litigations involving some of the Asserted Patents, we expect Signify to have significant amounts of prior art and invalidity charts in its possession, custody, or control.

The references discussed in these Joint Invalidity Contentions herein disclose the elements of the asserted claims explicitly or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. To the extent the attached claim charts cite to a reference for each element or limitation of an asserted claim, Defendant and the Third Party Defendants contend that such reference anticipates that claim and/or, in the alternative, renders the claim obvious. In addition, to the extent that the attached claim charts refer to additional references, Defendant and the Third Party Defendants contend, in the alternative, that the asserted claim is rendered obvious

for the reasons set forth herein and/or in the attached charts. To the extent suggested obviousness combinations are included herein, they are exemplary, are provided in the alternative to Defendant's and the Third Party Defendants' anticipation contentions, and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

To the extent that these Joint Invalidity Contentions reflect or otherwise embody particular constructions of terms or phrases in the asserted claims, Defendant and the Third Party Defendants do not propose that those are the proper constructions of those terms or phrases. Portions of these Joint Invalidity Contentions rely on Signify's apparent interpretation of the asserted claims in view of Signify's infringement allegations. As a result, these Joint Invalidity Contentions are not intended to, and do not necessarily, reflect Defendant's and the Third Party Defendants' interpretation of the true and proper scope of the asserted claims, and do not admit or suggest that Defendant and the Third Party Defendants agree with Signify regarding the scope of any of the asserted claims.

Defendant and the Third Party Defendants have thus applied the prior art on their assumption that Signify contends the asserted claims (1) are definite, (2) have written description support, and (3) are enabled, as suggested by Signify's Infringement Contentions. These Invalidity Contentions do not represent agreement to the meaning, definiteness, written description support for, or enablement of any asserted claim. Moreover, nothing in these Joint Invalidity Contentions admits that Defendant's and the Third Party Defendants' accused products meet any limitations of the asserted claims.

I. PRIORITY

A. 7,038,399 (the “’399 patent”)

The '399 patent issued from U.S. Application No. 10/435,687, filed on May 9, 2003 and claims priority to two provisional applications—Provisional Application No. 60/391,627, filed on

June 26, 2002; and Provisional Application No. 60/379,079, filed on May 9, 2002. The '399 patent is also a continuation-in-part of two applications—U.S. Application No. 09/805,368 and U.S. Application No. 09/805,590, both of which have filing dates of March 13, 2001. Signify contends that the '399 patent is entitled only to the May 9, 2002 priority date of U.S. Application No. 60/379,079 for claims 7, 8, 17–24, 34, 35, 42, 43, and 47, and the May 9, 2003 filing date of the '399 patent for claims 58–61. Signify thus concedes that the asserted claims of the '399 patent are not entitled to the earlier priority dates of U.S. Application Nos. 09/805,368 and 09/805,590.

Without conceding that the asserted claims of the '399 patent are entitled to the earliest claimed priority date on the face of the '399 patent of March 13, 2001, Defendant and the Third Party Defendants used that date as the priority date for these Joint Invalidity Contentions with respect to the '399 patent. As this is the earliest possible priority date that could attach to any asserted claim of the '399 patent, any subsequent determination by the Court of a later priority date on a claim-by-claim basis will render all references herein prior art to the '399 patent.

To the extent that Signify modifies this priority date, or Defendant and the Third Party Defendants obtain further information about the proper priority date, Defendant and the Third Party Defendants reserve the right to amend their response and challenge the priority date of the asserted patent claims, and to correspondingly amend their Joint Invalidity Contentions based on, including but not limited to, the discovery of additional information.

B. 7,348,604 (the “’604 patent”)

The '604 patent issued from U.S. Application No. 11/419,292, filed on May 19, 2006, and claims priority to Provisional Application No. 60/683,244 filed on May 20, 2005. Signify contends that the '604 patent is entitled to at least the May 20, 2005 priority date, and further asserts that the '604 patent is further entitled to an earlier priority date of March 19, 2004 as the result of an earlier conception and reduction to practice of the claimed invention. Without conceding that the

asserted claims of the '604 patent are entitled to either of these alleged priority dates, Defendant and the Third Party Defendants use the May 20, 2005 priority date reflected on the face of the '604 patent as the priority date for these Joint Invalidity Contentions with respect to the '604 patent.

To the extent that Signify modifies this priority date, or Defendant and the Third Party Defendants obtain further information about the proper priority date, Defendant and the Third Party Defendants reserve the right to amend their response and challenge the priority date of the asserted patent claims, and to correspondingly amend their Joint Invalidity Contentions based on, including but not limited to, the discovery of additional information.

C. 7,256,554 (the “’554 patent”) and 7,737,643 (the “’643 patent”)

The '554 patent issued from U.S. Application No. 11/079,450, filed on March 14, 2005, and claims priority to Provisional Application No. 60/553,318, filed on March 15, 2004. The '643 patent issued from U.S. Application No. 11/780,574 filed on July 20, 2007, and is a continuation of the '554 patent and claims priority to it. Without conceding that the asserted claims of the '554 patent and '643 patent are entitled to that priority date, Defendant and the Third Party Defendants use the March 15, 2004 date as the priority date for these Joint Invalidity Contentions with respect to the '554 patent and '643 patent.

To the extent that Signify modifies this priority date, or Defendant and the Third Party Defendants obtain further information about the proper priority date, Defendant and the Third Party Defendants reserve the right to amend their response and challenge the priority date of the asserted patent claims, and to correspondingly amend their Joint Invalidity Contentions based on, including but not limited to, the discovery of additional information.

D. 7,658,506 (the “’506 patent”)

The '506 patent issued from U.S. Application No. 11/748,100 filed on May 14, 2007 and claims priority to U.S. Provisional Application No. 60/747,110 filed on May 12, 2006. Without

conceding that the asserted claims of the '506 patent are entitled to that priority date, Defendant and the Third Party Defendants use the May 12, 2006 date as the priority date for these Joint Invalidity Contentions with respect to the '506 patent.

To the extent that Signify modifies this priority date, or Defendant and the Third Party Defendants obtain further information about the proper priority date, Defendant and the Third Party Defendants reserve the right to amend their response and challenge the priority date of the asserted patent claims, and to correspondingly amend their Joint Invalidity Contentions based on, including but not limited to, the discovery of additional information.

E. 10,299,336 (the “’336 patent”)

The '336 patent was filed on June 21, 2018 as a continuation-in-part of U.S. Application No. 15/811,062 (“the '062 Application”). The '062 Application is a continuation of U.S. Application No. 15/435,141 (“the '141 Application”) and claims priority to U.S. Provisional Application No. 62/297,424 (“the '424 Provisional”) which was filed on February 19, 2016. Signify does not assert that the claims of the '336 patent are entitled to any of the earlier claimed priority dates on the face of the '336 patent, but claims priority only to the filing date of the '336 patent itself, or June 21, 2018. As the '062 Application, the '141 Application, and the '424 Provisional fail to provide written description support for claims 1-20 of the '336 patent, and Signify seemingly concedes the lack of priority to the earlier filed applications, the asserted claims of the '336 patent are therefore entitled to a priority date no earlier than the '336 patent's June 21, 2018 filing date.

To the extent that Signify modifies this priority date, or Defendant and the Third Party Defendants obtain further information about the proper priority date, Defendant and the Third Party Defendants reserve the right to amend their response and challenge the priority date of the

asserted patent claims, and to correspondingly amend their Joint Invalidity Contentions based on, including but not limited to, the discovery of additional information.

II. STATE OF THE ART

Defendant and the Third Party Defendants may rely on the references in these Invalidity Contentions to show the state of the art at the relevant time. But these references are only exemplary of the state of the art, and do not limit the scope of what a person of ordinary skill in the art would have understood at the time. Defendant and the Third Party Defendants may rely on additional prior art, information, testimony, or knowledge to demonstrate what one of ordinary skill in the art would have understood prior to any priority date for the claims of the Asserted Patents.

III. IDENTIFICATION OF PRIOR ART

In addition to the prior art identified in the specification and prosecution histories of the Asserted Patents, Defendant and the Third Party Defendants may rely on the prior art identified in these Invalidity Contentions. Defendant and the Third Party Defendants identify each item of prior art by: (1) each patent by its patent number and country of origin; (2) each non-patent publication by its title, date of publication, and, where feasible, author and publisher; and (3) each prior art product or system that was in public use, sold, or otherwise available to the public by the relevant dates and entities involved. Defendant's and the Third Party Defendants' identification of prior art in these Joint Invalidity Contentions includes the publications themselves as well as the products, devices, and systems described therein. Defendant's and Third Party Defendants' identification of prior art for each of the Asserted Patents are set forth in Exhibits A through F.

IV. INVALIDITY UNDER 35 U.S.C. §§ 102 AND 103

In addition to and including the prior art disclosed in the Exhibits incorporated by reference herein, each of the asserted claims of the Asserted Patents is anticipated by and/or obvious in view of one or more items of prior art identified above either alone or in combination.

Furthermore, along with the references disclosed in these contentions, the exhibits thereto, the Asserted Patents and their respective prosecution histories, and the common sense and understanding of those in the relevant field at the time of the alleged invention, invalidity may be demonstrated by the live testimony of relevant witnesses, who will be identified in accordance with the case schedule and as discovery in this matter opens and proceeds. Such witnesses may be used, among other purposes, to discuss issues of prior art systems, prior art references, and the knowledge of one of ordinary skill in the art at the time of the alleged invention.

One or more combinations of the prior art references identified above would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior-art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. In addition, the combination of the prior-art references identified above would have been obvious because the combination represents the known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior-art references identified above includes the interrelated teachings of multiple prior art references; the

effects of the demands known to the design community or present in the marketplace; the complimentary and overlapping subject matter of the prior-art references; the existence of a known problem for which there was an obvious solution encompassed by the asserted claims; the existence of a known need or problem in the field of endeavor at the time of the alleged invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and: (1) the nature of the problem being solved, (2) the express, implied, and inherent teachings of the prior art, which recognize and attempt to solve the same problem(s), (3) the knowledge of persons of ordinary skill in the art in view of the interrelated teachings of multiple references, (4) the fact that the prior art is generally directed towards the same field, (5) the fact that the prior art generally is employed on similar devices; (6) the fact that many of the prior-art references refer to other references; and (7) the predictable results obtained in combining the different elements of the prior art. Additionally, a person of ordinary skill in the art would have been motivated to address at least the alleged problems or achieve the purported objectives identified in the description of the Asserted Patents.

Any reference or combination of references that anticipates or makes obvious an asserted independent claim also makes obvious any asserted claim dependent on that independent claim because every element of each dependent claim was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. Accordingly, Defendant and the Third Party Defendants contend that each asserted claim would

have been obvious not only by the exemplary combinations identified in these contentions, but also by any combination of references that renders obvious an asserted claim.

Numerous prior-art references, including those identified herein and in the claim charts attached hereto, reflect common knowledge and the state of the prior art prior to the respective priority dates of the Asserted Patents.

As it would be unduly burdensome to create detailed claim charts for such invalidating combinations, Defendant and the Third Party Defendants have provided illustrative examples of such invalidating combinations below. For at least the reasons described above and below in the examples provided, as well as in the attached claim charts, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any combination of those exemplary references identified herein, to meet the limitations of the asserted claims. As such, Defendant and the Third Party Defendants inclusion of exemplary combinations does not preclude Defendant and the Third Party Defendants from identifying other invalidating combinations as appropriate.

Defendant and the Third Party Defendants have attached Exhibits containing claim charts identifying examples of prior art that anticipate and/or render obvious each asserted claim of the Asserted Patents. Specifically, to the extent the attached claim charts cite to a reference for each element or limitation of an asserted claim, Defendant and the Third Party Defendants contend that such reference anticipates that claim. In addition, Defendant and the Third Party Defendants contend, in the alternative, that each asserted claim is rendered obvious for the reasons set forth in this document and the attached charts. To the extent that Signify contends that any one of the references does not disclose one or more elements of the asserted claims, it would have been obvious to combine the references in the Invalidity Charts with one or more other references.

As detailed in the Invalidity Charts and included in Exhibits A through F, the asserted claims of the Asserted Patents are obvious in view of the state of the prior art alone and/or in combination with the references described in the above-referenced Exhibits as well as the references and disclosures described below. The subject matter claimed in the asserted claims of the Asserted Patents would have been obvious because the prior art, common knowledge, and nature of the problems, viewed through the eyes of a person ordinarily skilled in the art, suggested the claimed elements. A person of ordinary skill in the relevant fields would have possessed knowledge and skills rendering him or her capable of combining the prior art references with knowledge in the field and common sense. Moreover, the asserted claims represent well-known combinations of familiar and pre-existing elements, yielding only predictable results.

V. INVALIDITY UNDER 35 U.S.C. § 112

Certain of the Asserted Patents are also invalid under 35 U.S.C. § 112 for at least the following reasons.

35 U.S.C. § 112 requires that the specification contain a written description of the invention. “[T]he hallmark of written description is disclosure.” *Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361-62 (Fed. Cir. 2011). The test for whether a specification adequately describes an invention is “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.... [T]he test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc); *see also Boston Scientific*, 647 F.3d at 1362.

The enablement requirement of § 112 demands that the patent specification enable “those skilled in the art to make and use the full scope of the claimed invention without undue experimentation.” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997).

“[T]he scope of the claims must be less than or equal to the scope of the enablement.” *Nat’l Recovery Tech., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1196 (Fed. Cir. 1999).

With respect to how to implement limitations of the alleged inventions of the asserted claims, the Asserted Patents do not provide any substantial disclosure beyond that found in the prior art, including the prior-art items identified in these Invalidity Contentions. As a result, Signify cannot contend that (1) the Asserted Patents would have enabled a person of ordinary skill to make the alleged inventions within the full scope of the asserted claims, while contending that (2) the prior art does not. To the extent Signify contends that any of the prior art does not provide an enabling description of the alleged inventions, the Asserted Patents also fail to provide an enabling disclosure of the alleged inventions.

Claims are indefinite under 35 U.S.C. § 112 when they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). Moreover, a claim term is indefinite where the claims, specification, and prosecution history do not “convey with reasonable certainty the measure of [a given variable] to be used.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015) (holding that “having a molecular weight of...” was indefinite as there were at least three different ways of measuring molecular weight and the intrinsic record did not convey which measure to use); *see also Honeywell Int’l, Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1339-40 (Fed. Cir. 2003) (holding indefinite a claim including a numeric limitation, “melting point elevation,” without disclosing which of multiple methods of measuring that number should be used).

In view of Signify’s infringement allegations and its purported attempt to map the claims to the accused products, the Asserted Claims of the Asserted Patents are invalid under 35 U.S.C.

§ 112 at least because they lack adequate written description support in the specification, are not enabled, and/or are indefinite.

A. '399 Patent

The asserted claims of the '399 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the '399 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “controller/controlled/controlling” limitations, subject to the court’s interpretation, recited in claims 7, 8, 17-24, 34, 35, 42, 43, 47, and 58-61 of the '399 patent are indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. Specifically, these limitations are means plus function limitations under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to the limitations.
- The “power circuitry” limitation recited in claims 17-24 of the '399 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “power-related signal” limitation recited in claims 7, 8, 17-24, 34, 35, 42, 43 and 47 of the '399 patent is indefinite, lacks written description support, and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Moreover, the claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “signals other than a standard A.C. line voltage” limitation recited in claims 7, 8, 17-24, 34, 35, 42, and 43 of the '399 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation.

- The “essentially white light” limitation recited in claim 47 of the ’399 patent is indefinite, lacks written description support, and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Moreover, the claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “so as to approximate light generation characteristics of an incandescent light source” limitation recited in claim 47 of the ’399 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation.

B. ’554 Patent

The asserted claims of the ’554 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the ’554 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “without optically monitoring the first radiation” generated by the LED limitation recited in claims 1, 2, 5, 46, 47, 49, and 50 of the ’554 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. More specifically, this claim limitation was added during prosecution of the ’554 patent to distinguish the claimed invention from prior art. Yet the specification discloses only that the light intensity of the LED is controlled without monitoring or regulating the voltage or current provided to the LED, without any express disclosure of “without optically monitoring the first radiation” generated by the LED. While the specification notes that there is no requirement to obtain feedback information from the load, such feedback information relates to the voltage or current provided to the LED—not the radiation emitted by the LED.

- The “energy transfer element” limitation recited in claims 1, 2, 5, 6, 46, 47, 49, 50 and 51 of the ’554 patent is indefinite. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. More specifically, these limitations are means plus function limitations under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to the limitations. The claims recite a generic place holder, *i.e.*, an element. The energy transfer element does not define any structure. As such, it is unclear if the claim is intended to recite an element for transferring energy in means function format or not, and therefore this limitation is indefinite.

C. ’604 Patent

The asserted claims of the ’604 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the ’604 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “means for activation of the one or more light-emitting elements” limitation recited in claims 1, 2, 4, 5, 8, and 10 of the ’604 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. Specifically, this limitation is a means plus function limitation under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to this limitation.
- The “light emitting module” limitation recited in claims 1, 2, 4, 5, 8, and 10 of the ’604 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “heat dissipation element” limitation recited in claims 1, 2, 4, 5, 8, and 10 of the ’604 patent is indefinite, lacks written description support, and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Moreover, the claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.

- The “housing element including fastening means for detachably coupling the housing element to the heat dissipation element” limitation recited in claims 1, 2, 4, 5, 8, and 10 of the ’604 patent is indefinite, lacks written description support, and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Moreover, the claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. More specifically, these limitations are means plus function limitations under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to the limitations.
- The “a thermally conductive substrate having one or more light-emitting elements thermally connected thereto” limitation recited in claims 1, 2, 4, 5, 8, and 10 of the ’604 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “one or more optical element” limitation recited in claims 2, 4, and 5 of the ’604 patent is indefinite, lacks written description support, and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Moreover, the claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “optical element is a reflective element, refractive element, diffractive element, diffusive element or holographic element” limitation recited in claims 4 and 5 of the ’604 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation.

D. ’506 Patent

The asserted claims of the ’506 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the '506 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “for irradiating at least a portion of the interior surface with visible light perceivable by a viewer via the gap defined in the architectural surface” limitation recited in claims 1, 2-5, 7, 14, and 15, and the “such that the at least one LED-based light source is concealed from the viewer” limitation recited in claims 1, 2-5, 7, 14 and 15 of the '506 patent are indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. These limitations render the claims indefinite mixed-use claims, as one of ordinary skill in the art cannot determine whether infringement occurs when one creates a cove lighting apparatus, or whether infringement occurs when the user actually uses the cove lighting apparatus.

E. '643 Patent

The asserted claims of the '643 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the '643 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “perceivably white light” limitation recited in claim 25 of the '643 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention.
- The “energy transfer element” limitation recited in claim 25 of the '643 patent is indefinite. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. More specifically, these limitations are means plus function limitations under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to the limitations. The claim recites a generic place holder, *i.e.*, an element. The energy transfer element does not define any structure. As such, it is unclear if the claim is intended to recite an element for transferring energy in means function format or not, and therefore this limitation is indefinite.

F. '336 Patent

The asserted claims of the '336 patent are invalid for failure to satisfy the requirements of 35 U.S.C. § 112, including without limitation, because they do not satisfy the definiteness, written description, and/or enablement requirements.

For example, the asserted claims of the '336 patent are invalid under 35 U.S.C. § 112 for at least the following reasons:

- The “discrete correlated color temperature (CCT)” limitation recited in claims 1, 3-5, 7, 9, 11-13, 15, 16, and 19 of the '336 patent is indefinite. The claims, read in light of the specification and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. Specifically, this limitation lacks written description in the specification and is not defined; the specification does not define how the switch corresponds to each position of the plurality of positions.
- The “switch [that] has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire” limitation recited in claims 1, 3-5, 7, 9, and 11-12 of the '336 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. The '336 patent specification discloses the use of a DIP switch, but the DIP switch alone cannot provide discrete correlated color temperature (CCT) output, and even a DIP switch coupled with other disclosed digital logic circuitry would only be able to operate on/off performance on a full power basis, and would not allow any dimming performance between the first LED and the second LED. And without full dimming capabilities, CCT tuning technology, which requires a full dimming capacity that can be reversely and complementarily adjusted to help the total light intensity level to remain constant while the color temperature is being tuned, would not be enabled and there is no written description to support such operation in the specification. In addition, the claims require that “one” light source be able to provide multiple correlated color temperatures, but the specification neither provides written description support for such an embodiment, nor does the specification provide a POSITA with adequate disclosure to make or use such embodiment. Also, a POSITA would not understand how each position of the plurality of positions of the switch “corresponds to” a discrete correlated color temperature and the claim and the specification do not define what “corresponds to” means.

- The “wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire” limitation recited in claims 13, 15, 16, and 19 of the ’336 patent lacks written description support and is not enabled. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. Also, a POSITA would not understand how each position of the plurality of positions of the switch “corresponds to” a correlated color temperature and the claim and the specification do not define what “corresponds to” means. In addition, the ’336 patent specification discloses the use of a DIP switch, but the DIP switch alone cannot provide discrete correlated color temperature (CCT) output, and even a DIP switch coupled with other disclosed digital logic circuitry would only be able to operate on/off performance on a full power basis, and would not allow any dimming performance between the first LED and the second LED. And without full dimming capabilities, CCT tuning technology, which requires a full dimming capacity that can be reversely and complementarily adjusted to help the total light intensity level to remain constant while the color temperature is being tuned, would not be enabled and there is no written description to support such operation in the specification.
- The “first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources” limitation recited in claim 5 of the ’336 patent lacks written description support and is not enabled. For reasons previously stated, the specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation.
- The “coupling feature” limitation recited in claims 13, 15, 16, and 19 of the ’336 patent is indefinite. The specification fails to provide sufficient written description regarding the claimed feature, fails to describe the alleged invention in sufficient detail to convey to a POSITA that the applicant had possession of the alleged invention, and does not inform a POSITA how to make or use the alleged invention without undue experimentation. More specifically, these limitations are means plus function limitations under 35 U.S.C. § 112, and there is no structure disclosed in the specification corresponding to the limitations. The claim recites a generic place holder, *i.e.*, a feature. The at least one first coupling feature does not define any structure. As such, it is unclear if the claim is intended to recite an element for transferring energy in means function format, and if so what corresponding

structure in the specification is intended to be covered by this limitation. Therefore, this limitation is indefinite.

- The term “at least one electrical component” in claims 1, 3-5, 7, 9, and 11-12 of the ’336 patent is indefinite. While a POSITA would certainly have understood what an electrical component might include in a general electronics sense, that term is broad and ambiguous as used in the ’336 patent claims, and neither the patent claim nor the specification provide any boundaries or framework for how to properly interpret the term. As such the claims of the ’336 patent are invalid as indefinite.

* * * * *

VI. CONCLUSION

For the reasons discussed above, the asserted claims of the Asserted Patents are invalid.

As set forth above, Defendant and the Third Party Defendants reserve the right to supplement these Initial Joint Invalidity Contentions as discovery progresses.

Date: November 22, 2023

Respectfully submitted,

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EXHIBIT F

IDENTIFICATION OF PRIOR ART AND CLAIM CHARTS CONCERNING THE '336 PATENT

Introduction And Summary of Defendant's And Third Party Defendants' Identification of Prior Art and Claim Charts Concerning the '336 Patent

A. Prior Art Patents & Publications to the '336 Patent

Defendant and the Third Party Defendants contend the following prior art patents and publications anticipate or render obvious one or more asserted claims of the '336 Patent under 35 U.S.C. §§ 102, 103:

Patent No./Pub. No.	Country of Origin	Short Title
10,234,091	U.S.	Chaimberg
7,178,941	U.S.	Roberge
9,801,250	U.S.	Halliwel
7,192,160	U.S.	Reiff
10,278,250	U.S.	Cree
9,719,642	U.S.	Macias
8,729,812	U.S.	Kuwu
8,890,436	U.S.	Chou
7,014,336	U.S.	Ducharme
10,091,855	U.S.	Van Winkle
10,136,503	U.S.	Chen

Moreover, the following further reflect the state of the art at the time of the priority date of the '336 Patent and the knowledge of a person of ordinary skill in the art:

- The '336 Patent concedes that elements 1[p], 1[a], 1[b], and 1[c] of claim 1 of the '336 Patent were known in the prior art. For example, Fig. 8 of the '336 Patent is labeled “prior art” and depicts a luminaire with a housing 805 with an outer surface that forms a cavity that includes “one or more [electrical] components (e.g., light sources) disposed on and/or within the housing 805,” and an electrical cable 827 that is “connected to one or more [electrical] components (e.g., light sources) disposed ... within the housing 805.” See '336 Patent at 10:66-11:20, Fig. 8.
- U.S. Patent No. 9,345,112 (“Chen II”).

B. '336 Patent Prior Art Exemplary Combinations

The following combinations are merely exemplary and provided as examples of the myriad combinations that render the asserted claims of the '336 Patent invalid. Defendant's and the Third Party Defendants' identification of exemplary combinations does not preclude them from identifying other invalidating combinations as discovery progresses and based on, for instance, Signify's supplemental infringement contentions, fact discovery (including that from third parties), claim construction positions taken by Signify, or any order by the Court on claim construction.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are invalid as anticipated under § 102 by Chaimberg. Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Chaimberg alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Roberge alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Chaimberg and/or Halliwell.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Halliwell alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Chaimberg and/or Reiff.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Reiff alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Roberge, Chaimberg, and/or Halliwell.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Cree alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Halliwell and Chaimberg.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are obvious under § 103 over Macias alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Chaimberg, Reiff, Roberge, and/or Halliwell.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are invalid as anticipated under § 102 by Kuwu. Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are invalid as obvious under § 103 over Kuwu alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Ducharme, Van Winkle, Halliwell, and/or Roberge.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are invalid as anticipated under § 102 by Chou. Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are

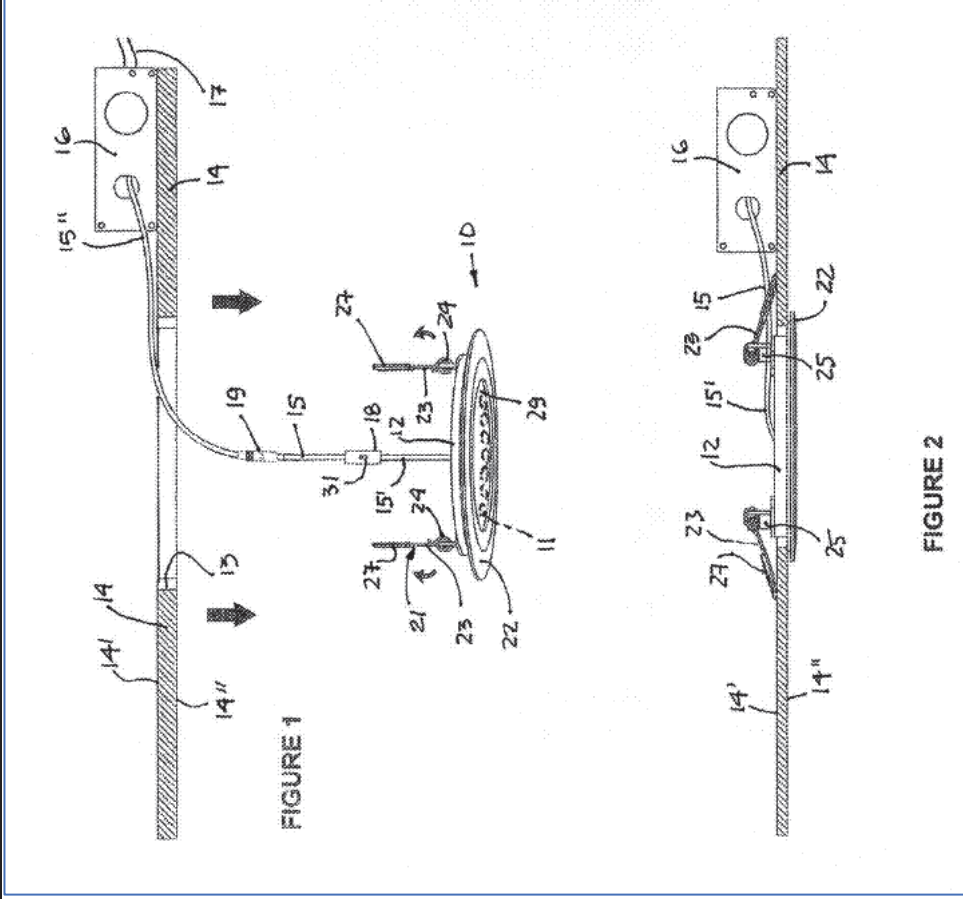
invalid as obvious under § 103 over Chou alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Ducharme, Van Winkle, Halliwell, Roberge, and/or Chen.

Claims 1, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, and 19 of the '336 Patent are invalid as obvious under § 103 over Chen alone, or in view of the knowledge of a POSITA, Signify's admitted prior art, and/or one or more references identified by Defendant and the Third Party Defendants, including but not limited to Chaimberg.

U.S. Patent No. 10,234,091 (“Chaimberg”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 10,234,091 (“Chaimberg”)

’336 Claim/Element	U.S. Patent No. 10,234,091 (“Chaimberg”)
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Chaimberg discloses the preamble of claim 1 of the ’336 Patent. For example, the Abstract of Chaimberg states that Chaimberg relates to “A ceiling mountable LED light fixture is described and wherein at least two sets of LED’s of different correlated color temperatures (CCT) are mounted in its housing. The LED light fixture is adapted to be removably secured in a housing mounting hole in a ceiling sheeting material. A cable is secured to the light fixture to supply drive current to the LED sets. A toggle switch is mounted in the cable in close proximity to the light fixture. The cable also has a predetermined length and is also secured at a far end to a driver circuit mounted in a driver housing. The driver housing is positioned behind the ceiling sheeting material spaced from the housing mounting hole. The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED’s or both sets of LED’s simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.” Chaimberg at (57). Further, Figs. 1 and 2 of Chaimberg show the “LED light fixture” (<i>i.e.</i> luminaire) of Chaimberg. <i>See</i>, Chaimberg at 2:51-60; Figs. 1 and 2.

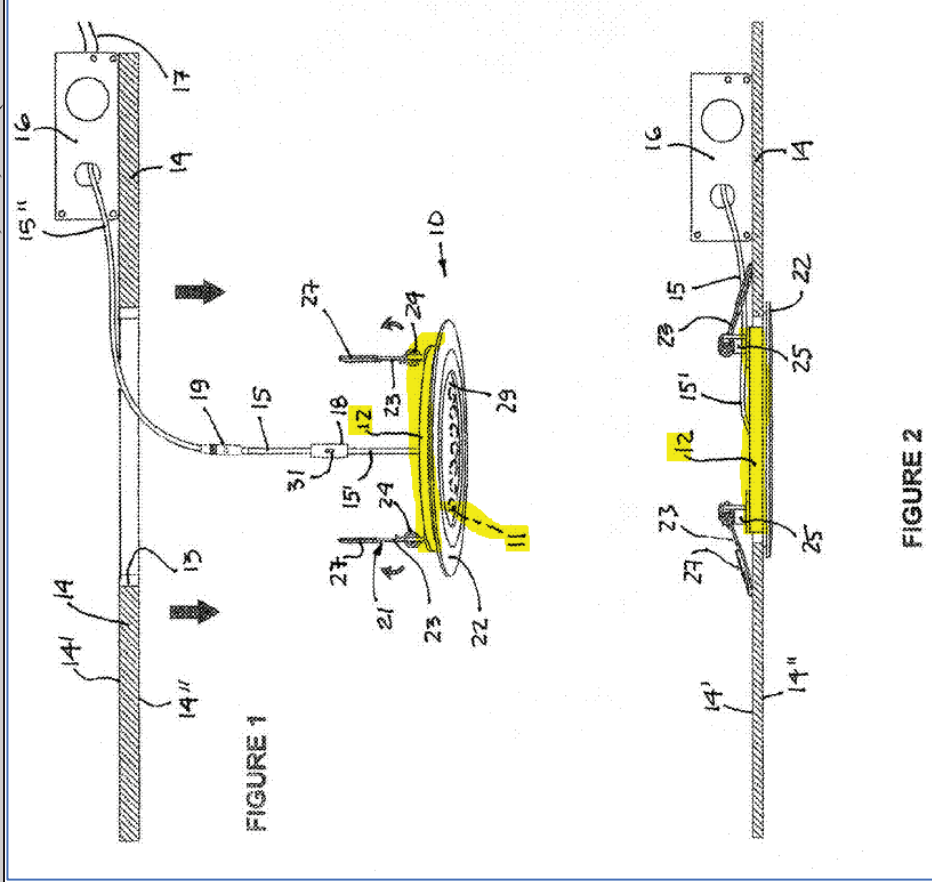


Thus, Chaimberg discloses a luminaire as recited in the preamble of claim 1 of the '336 Patent.

Chaimberg discloses element 1[a] of claim 1 of the '336 Patent.

For example, the LED light fixture of Chaimberg includes a "light housing 12" and the "LED's 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10." See, Chaimberg at 2:66-3:12.

Further, Figs. 1 and 2 depict the housing as shown below. See Chaimberg at Figs. 1 and 2.



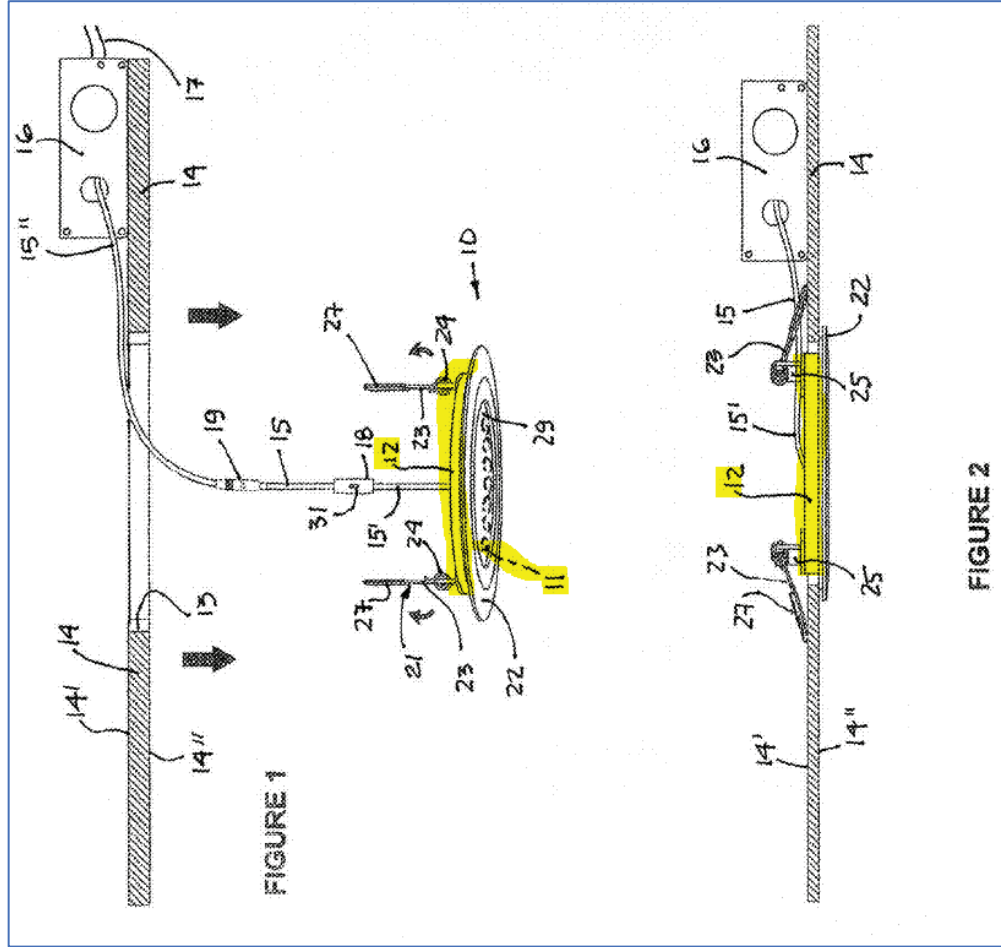
Further, the housing 12 includes a circumferential flange 22, as shown above. Fig. 1, 2:32-34, 3:61-4:3. The housing 12 also includes a "wall" that extends vertically from the circumferential flange 22, towards ceiling sheeting 14. *Id.*, 3:3-5. As shown in Figure 1, outer surfaces of the wall and the circumferential flange 22 form a cavity that holds LEDs 11. *Id.* (LEDs 11 are mounted "inside a wall of the housing 12").

Thus, Chaimberg comprises housing comprising at least one outer surface that forms a first cavity as recited in element 1[a] of claim 1 of the '336 Patent.

1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"

Chaimberg discloses element 1[b] of claim 1 of the '336 Patent.

For example, the LED light fixture of Chaimberg includes a "light housing 12" and the "LED's 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10." See, Chaimberg at 2:66-3:12.



Thus, the LEDs mounted within the housing 12 of Chaimberg are "at least one electrical component disposed, at least in part, within the first cavity" of the housing as recited in element 1[b] of claim 1 of the '336 Patent.

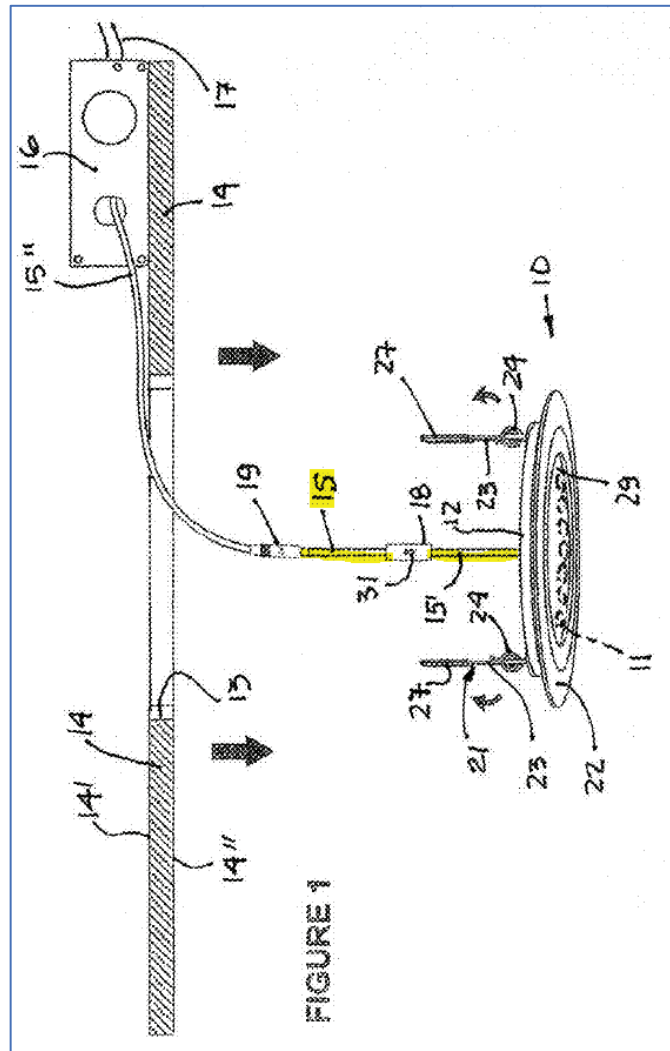
'336 Claim/Element

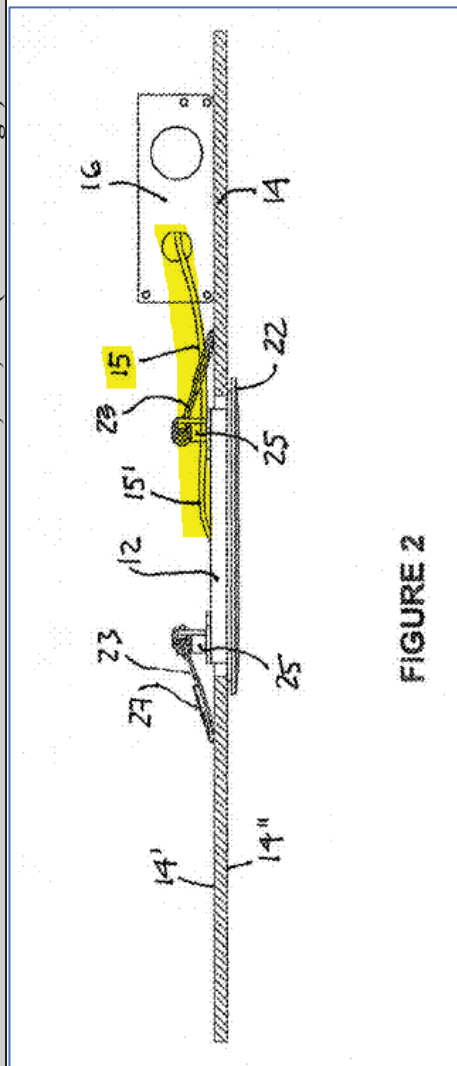
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"

U.S. Patent No. 10,234,091 ("Chaimberg")

Chaimberg discloses element 1[c] of claim 1 of the '336 Patent.

For example, the LED light fixture of Chaimberg includes "a cable 15 [that] is secured at one end 15', to the light housing 12 and has wires therein secured to the two sets of LED's to supply driving current to each of the sets and such is obvious to a person skilled in the art. The cable 15 is also secured at a far end 15' to a driver circuit 20 as illustrated in FIG. 3. The driver circuit 20 is mounted in a driver housing 16 to which is supplied line voltage from live wire 17." Chaimberg at 3:14-25; *See also* Chaimberg at 3:49-60, Figs. 1 and 2.



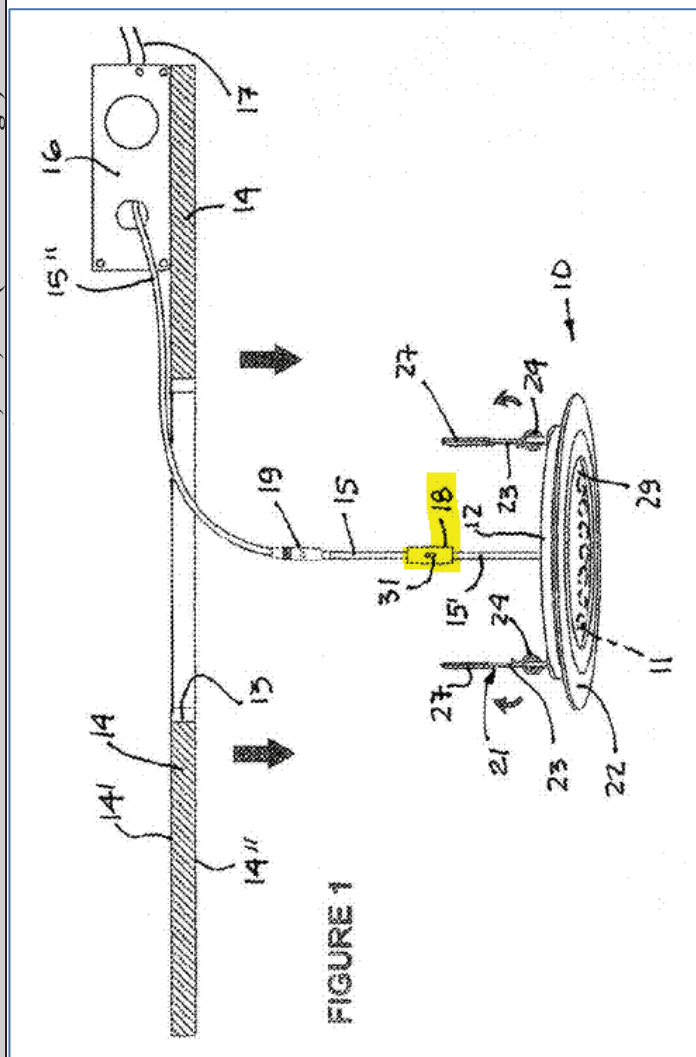


Thus, the cable 15 of the LED light fixture of Chaimberg is “an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component” as recited in element 11[c] of claim 1 of the ’336 Patent.

Chaimberg discloses element 1[d] of claim 1 of the '336 Patent.

For example, the switch 18 is mounted on the electrical cable 15. See Chaimberg at 3:49-60 (“As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15' and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair.”); see *also id.* at Fig. 1

11[d]. “a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,”



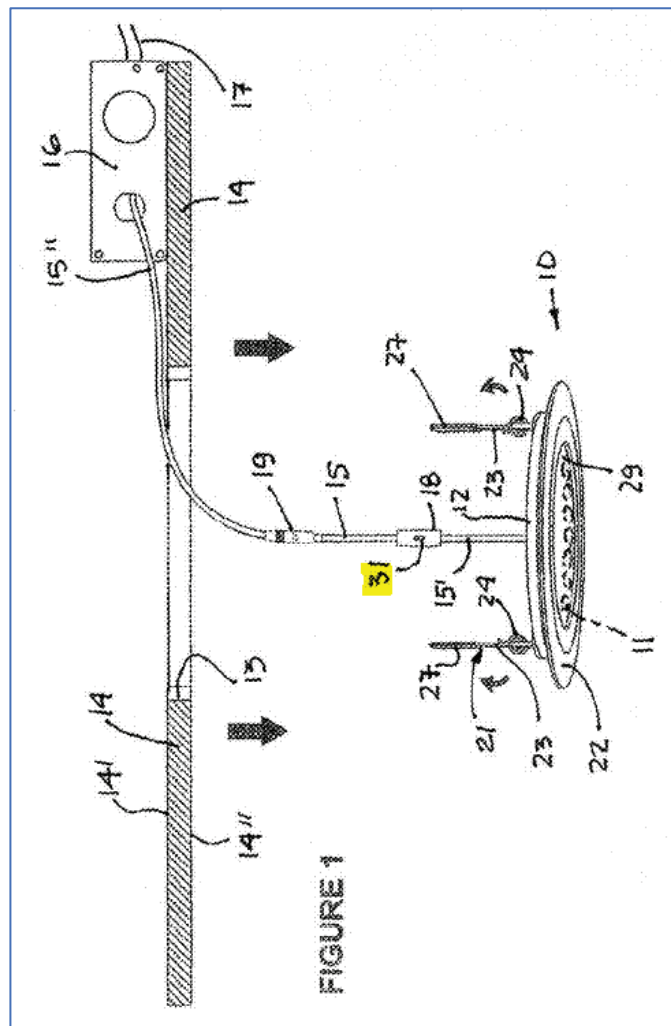
Thus, the switch 18 of Chaimberg is “a switch coupled to the electrical cable [15], wherein the switch is disposed remotely from the housing” as recited in element 1[d] of claim 1 of the ’336 Patent.

Chaimberg discloses element 1[e] of claim 1 of the '336 Patent.

For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-49.

See also Chaimberg at 4:37-5:10 (“At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30.... When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current

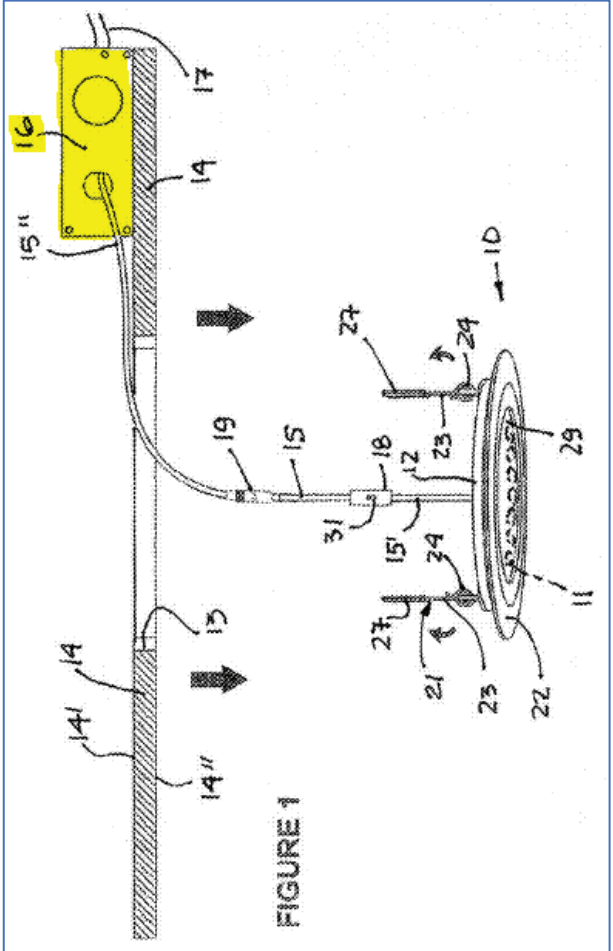
at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads of the 5000 K LED's. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30'. When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).")



Thus, the switch 18 of Chaimberg is a switch with “a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire” as recited in claim 1 of the ’336 Patent.

'336 Claim/Element	U.S. Patent No. 10,234,091 ("Chaimberg")
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Chaimberg discloses claim 3 of the '336 Patent. For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," each of these positions are distinct and correspond to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-48. FIGURE 1 See also Chaimberg at 4:37-5:10 ("At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30. ... When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads

'336 Claim/Element	U.S. Patent No. 10,234,091 ("Chaimberg")
	of the 5000 K LED's. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30'. ... When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).") Thus, "each position of the plurality of positions [of the switch 18 of Chaimberg] is discrete" as recited in claim 3 of the '336 Patent.
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Chaimberg alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious claim 4 of the '336 Patent. For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture. It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs. Accordingly, Chaimberg alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious a switch 18 of Chaimberg "wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K	Chaimberg alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious claim 5 of the '336 Patent. For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture (3000 K, 4000K, and 5000K). It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs of 3500K and 2700K.

'336 Claim/Element	U.S. Patent No. 10,234,091 ("Chaimberg")
output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources." 7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Accordingly, Chaimberg alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious a switch 18 of Chaimberg "wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources." Chaimberg alone, or in the knowledge of a POSITA, or in combination with other prior art references renders, obvious claim 4 of the '336 Patent. For example, the 'Chaimberg includes a driver housing 16 (<i>i.e.</i> a junction box) with an internal cavity, "the driver circuit 20 is mounted in the driver housing 16." Chaimberg at 3:23-24, 4:30-37. The driver circuit 20 controls the temperature output based on the setting of the switch 18. <i>See</i> Chaimberg at 4:30-37 ("With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions."); <i>see also id.</i> at Fig. 1.
	

'336 Claim/Element

12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."

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Chaimberg discloses claim 12 of the '336 Patent.

For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); *see also id.* at 1:8-15 ("The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED's of different correlated color temperature (CCT) and wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole."); Fig. 1.

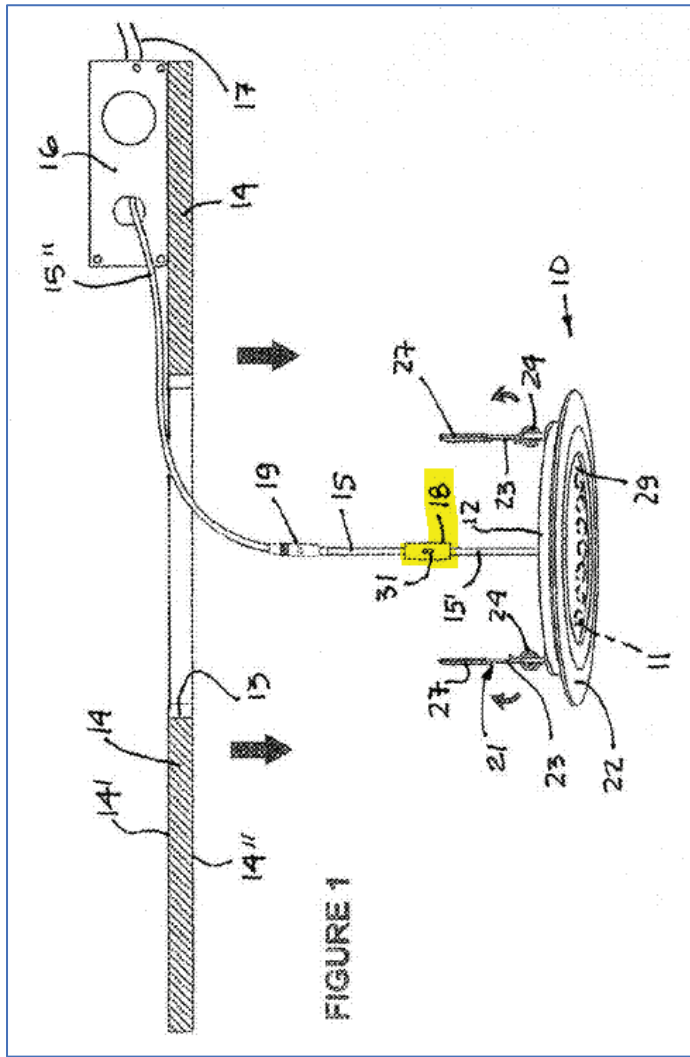


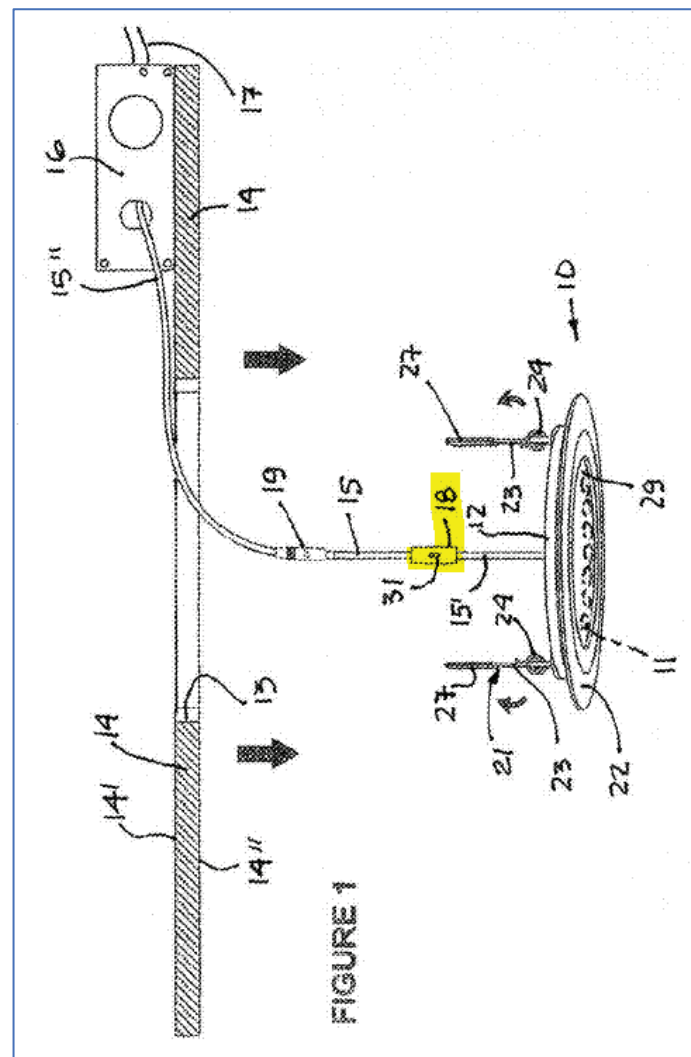
FIGURE 1

Further, the CCT switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is "accessible and visible" to the user when the housing is removed from its installed location (*id.*, Abstract, 4:16-29). Fig. 1.

Thus, Chaimberg discloses a luminaire "wherein the switch is accessible to a user when the housing is removed from its installed location" as recited in claim 12 of the '336 Patent.

13[pre]. “A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:”

To the extent the preamble is limiting, Chaimberg discloses the preamble of claim 13 of the '336 Patent. For example, the LED light fixture of Chaimberg includes a switch 18. *See* Chaimberg at 3:49-60 (“As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15’ and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED’s or to replace the light transmitting lens 29 or for any repair.”); *see also id.* at 2:38-45 (“The cable has a predetermined length to permit the LED light fixture to be withdrawn from the fixture mounting hole a predetermined distance to provide access to a selector switch mounted in the cable to permit selective activation of either one of the at least two sets of LED’s or both sets of LED’s simultaneously to cause the LED light fixture to generate light at a selected desired correlated color temperature (CCT).”); Chaimberg at 4:30-5:10; Fig. 1.



Thus, Chaimberg discloses “[a] switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire,” as recited in the preamble of claim 13 of the ’336 Patent.

and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); *see also id.* at Fig. 1.

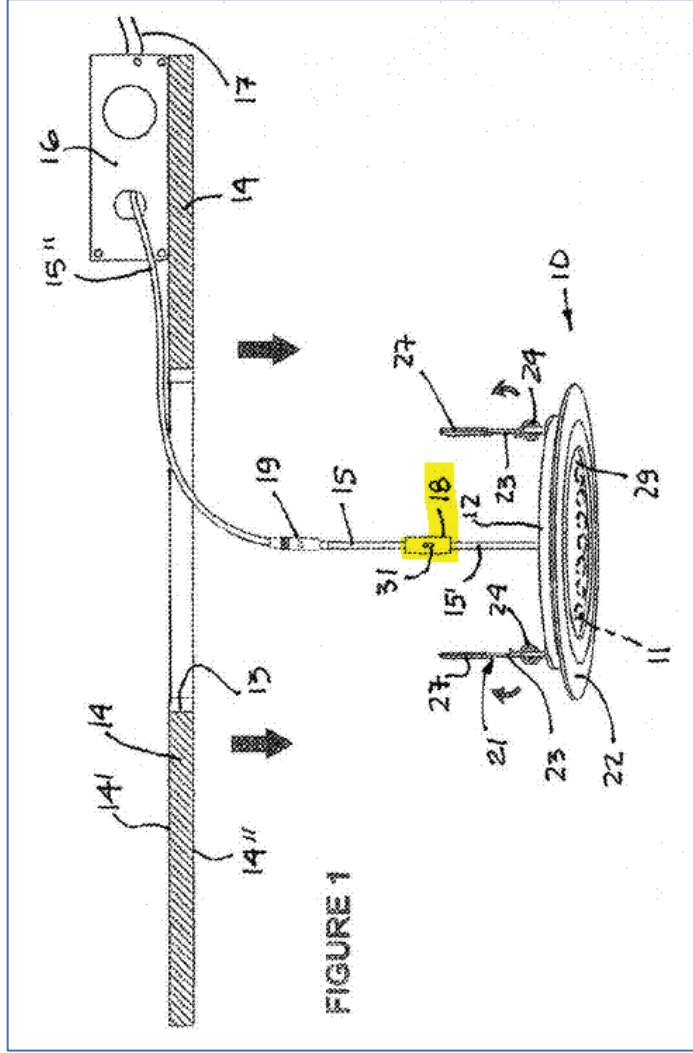


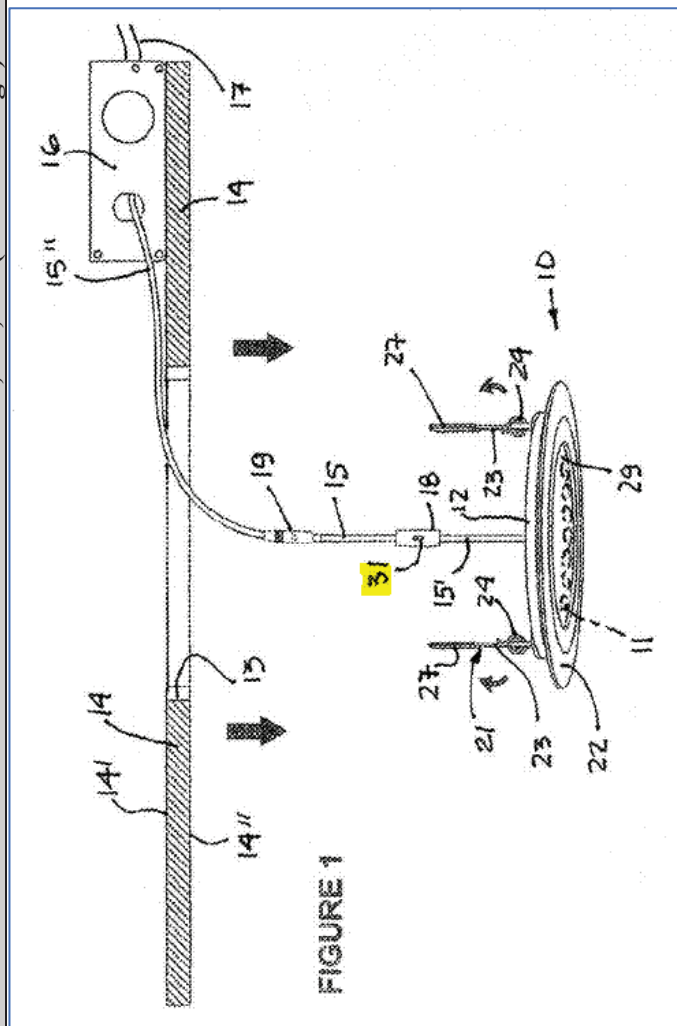
FIGURE 1

Thus, the switch 18 includes "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire" as recited by element 13[b] of claim 13 of the '336 Patent.

13[c]. "an actuator disposed on the body, wherein the actuator has a range of positions,"

Chaimberg discloses element 13[c] of claim 13 of the '336 Patent.

For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-63.



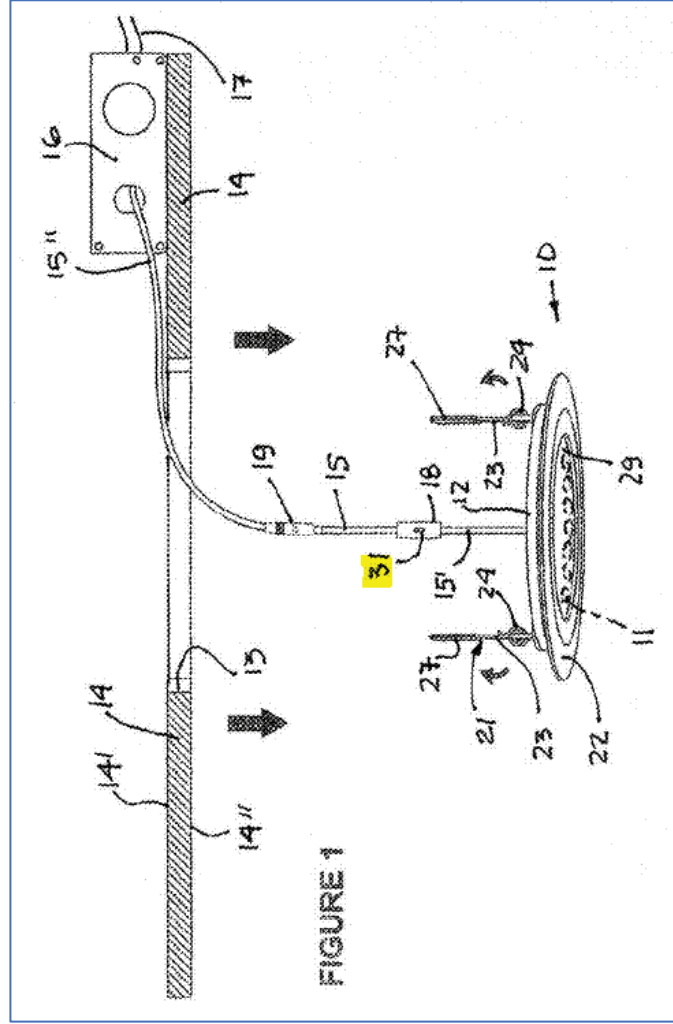
Thus, Chaimberg discloses a CCT switch with “an actuator disposed on the body, wherein the actuator has a range of positions,” as recited in element 13[c] of claim 13 of the ’336 Patent.

Chaimberg discloses element 13[d] of claim 13 of the '336 Patent.

For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-48.

See *also* Chaimberg at 4:37-5:10 (“At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30.... When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current

at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads of the 5000 K LED's. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30'. ... When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).")



Thus, Chaimberg discloses a CCT switch "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire" as recited by element 13[d] of claim 13 of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 10,234,091 (“Chaimberg”)
15. “The switch of claim 13, wherein each position is discrete within the range of positions.”	Chaimberg discloses claim 15 for the reasons discussed above with respect to claim 3. <i>See</i> claim 3 above.
16. “The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position.”	Chaimberg alone, or in the knowledge of a POSITA, and/or in view of the other cited prior art references, renders obvious claim 16 for the reasons discussed above with respect to claim 4. <i>See</i> claim 4 above.
19. “The switch of claim 13, wherein the body is configured to be disposed within a junction box.”	Chaimberg alone, or in the knowledge of a POSITA, and/or in view of the other cited prior art references, renders obvious claim 19 for the reasons discussed above with respect to claim 7. <i>See</i> claim 7 above.

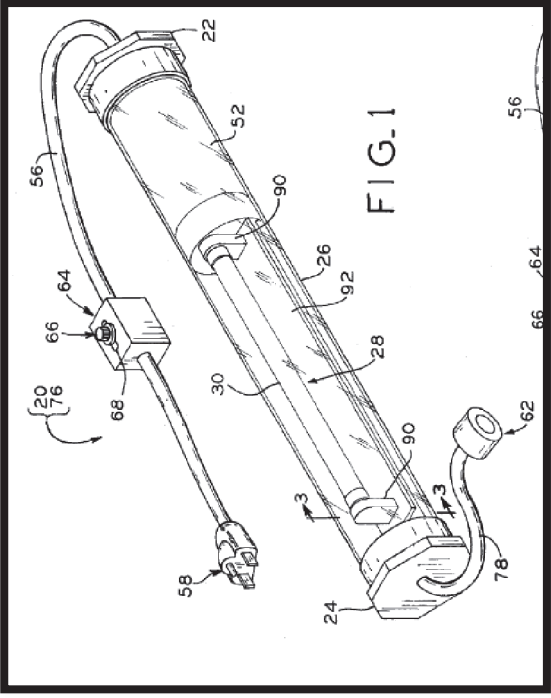
U.S. Patent No. 7,192,160 (“Reiff”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 7,192,160 (“Reiff”)

Secondary Reference(s): U.S. Patent No. 9,801,250 (“Halliwell”); U.S. Patent No. 10,234,091 (“Chaimberg”); U.S. Patent No. 7,178,941 (“Roberge”).

’336 Claim/Element	U.S. Patent No. 7,192,160 (“Reiff”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Reiff discloses the preamble of claim 1 of the ’336 Patent. For example, Reiff discloses “a light fixture having a base and two light sources mounted on the base.” Reiff at 2:17-19. Further, Reiff discloses that “[l]ight sources 28 used in embodiments of the lights described hereinbelow may include fluorescent lamps 30 and LEDs 32.” Reiff at 3:28-30. Thus, Reiff discloses a luminaire as recited in the preamble of claim 1 of the ’336 Patent.
1[a]. “a housing comprising at least one outer surface that forms a first cavity;”	Reiff discloses element 1[a] of claim 1 of the ’336 Patent. For example, Reiff discloses “the present invention is generally tubular having two end caps 22 and 24 engaging opposite ends of a transparent housing 26 (FIGS. 1, 2, 5, 7). Transparent housing 26 extends the length of the light and encases light source or sources 28 mounted therein.” Reiff at 3:20-24. Further, Figures 1 and 7 each show the housing comprising the outer surface 26 that forms a cavity that holds LEDs.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"	Thus, Reiff discloses element 1[a] of the '336 Patent. Reiff discloses element 1[b] of claim 1 of the '336 Patent. For example, Reiff discloses that "[m]ounted within the housing is a plate to which the light source is mounted. The plate may be in the form of a circuit board for mounting LEDs." Reiff further discloses "a light fixture having a base and two light sources mounted on the base." Reiff at 2:17-19. Further, Reiff discloses that "[l]ight sources 28 used in embodiments of the lights described hereinbelow may include fluorescent lamps 30 and LEDs 32." Reiff at 3:28-30, Fig. 1.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	 Thus, Reiff at discloses an electrical component in the form of an LED within the first cavity as recited in element 1[b] of the '336 Patent. Reiff discloses element 1[c] of claim 1 of the '336 Patent. For example, Reiff discloses an electrical cable in the form of an electrical cord 56: "Electrical cord 56 extends from end cap 24 having control box 64 located along the cord" (Reiff at 5:20-21) and "Extending from end cap 22 is electrical cord 56 having plug 58 at a distal end of the cord for insertion into a conventional electrical outlet." (Reiff at 7:22-24). Thus, Reiff discloses the electrical cable as recited in element 1[c] of the '336 Patent. Reiff discloses element 1[d] of claim 1 of the '336 Patent. For example, Reiff discloses the electrical cord "extends from end cap 24 having control box 64 located along the cord. Control box 64 includes switch 66 which is rotatable to control the intensity of light source 28." Reiff at 5:20-23. As shown in Figure 1 below, the switch 66 is located remotely from the housing 26.
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	
1[d]. "a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,"	

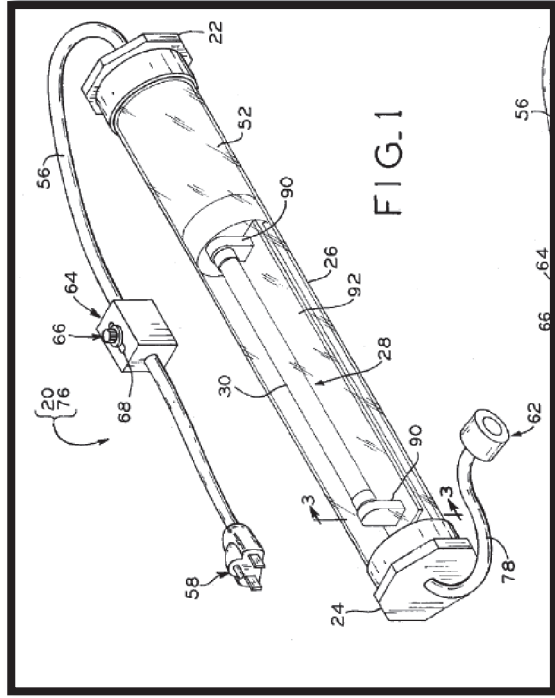
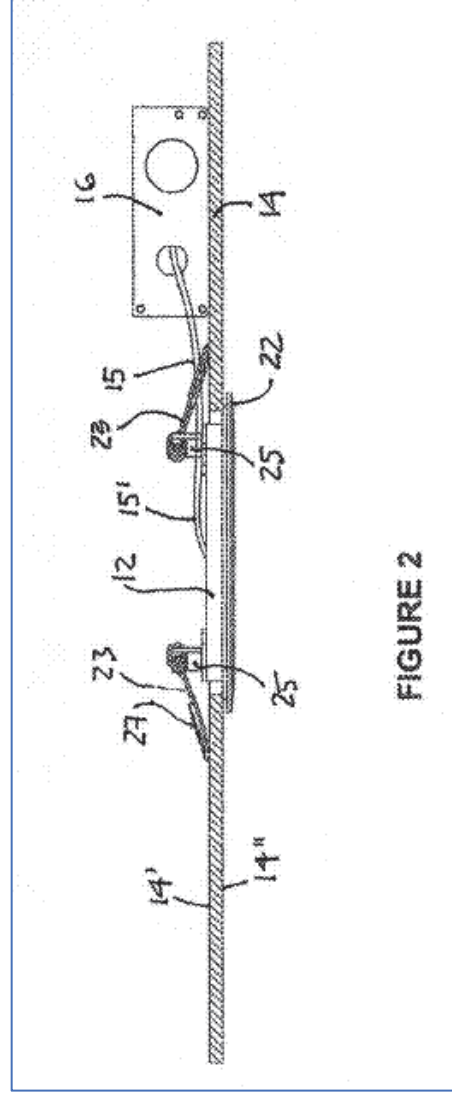


Figure 2 of Reiff further discloses the following:



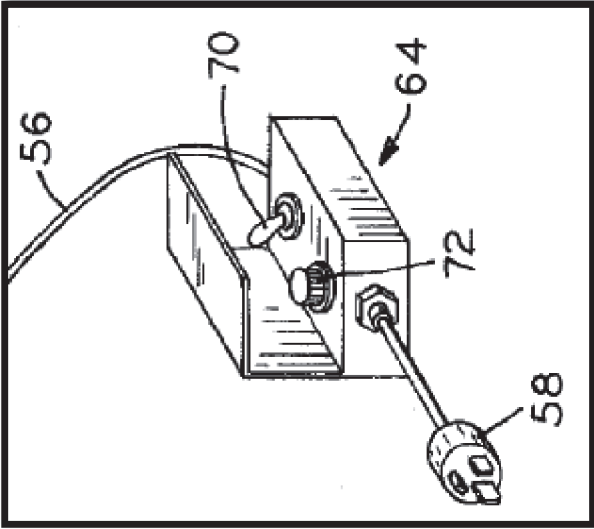
Reiff at Fig. 2.

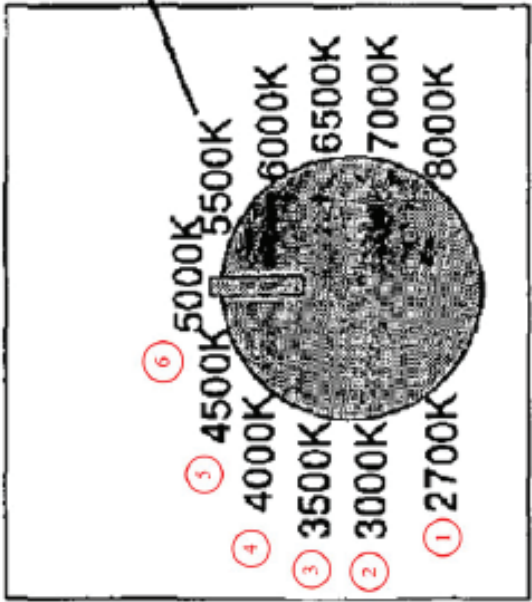
Further, the LED fixture is "adapted to be removably secured in a housing mounting hole in a ceiling sheeting material," the "selector switch 18 is mounted [in/]on the cable 15" (Chaimberg at Abstract, 3:49-

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	54), and the selector switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. <i>Id.</i>, Abstract. When the light fixture is "retracted from its fixture mounting hole," the switch 18 is below the ceiling 14 and accessible to the user. <i>Id.</i>, 3:13-15, Fig. 1. Fig. 2 shows the light fixture "mounted in the fixture mounting hole." <i>Id.</i>, 2:58-61, Fig. 2. The cable 15 (where the switch 18 is mounted) is on the inner side of the "ceiling sheeting material 14" and inaccessible when the LED light fixture is installed. <i>Id.</i>, 4:16-29, Fig. 2. Thus, Reiff discloses a remotely disposed switch coupled to the electrical cable as recited in element 1[d] of the '336 Patent.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Reiff discloses element 1[e] of claim 1 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Reiff at Fig. 9 (cropped). Thus, Reiff discloses the switch with discrete positions corresponding to color and brightness outputs as recited in element 1[e] of the '336 Patent. Reiff discloses claim 3 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39. Thus, Reiff discloses the switch with discrete positions corresponding to color and brightness outputs as recited in claim 3 of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Reiff alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Reiff discloses "[s]witch 66 has three positions, one position being the off position as shown in FIG. 2., one position operating the fluorescent lamp and one position operating the LEDS. Switch 66 slides into one of the three positions and is rotatable to control the intensity of the light source. Light 108 is illustrated as being provided with switch 66; however, any suitable type of switch may be used to operate the light." Reiff at 6:20-27. A POSA would understand that Reiff discloses a switch with a fourth and fifth position, in addition to the three disclosed by Reiff. Thus, Reiff discloses the plurality of switch positions as recited in claim 4 of the '336 Patent. To the extent that Reiff does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, Roberge discloses a switch with five positions. Fig. 34i shows "a dial [switch that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light" Roberge at 42:51-54, Fig. 34i. Fig. 34i Roberge at Fig. 34i (annotated).

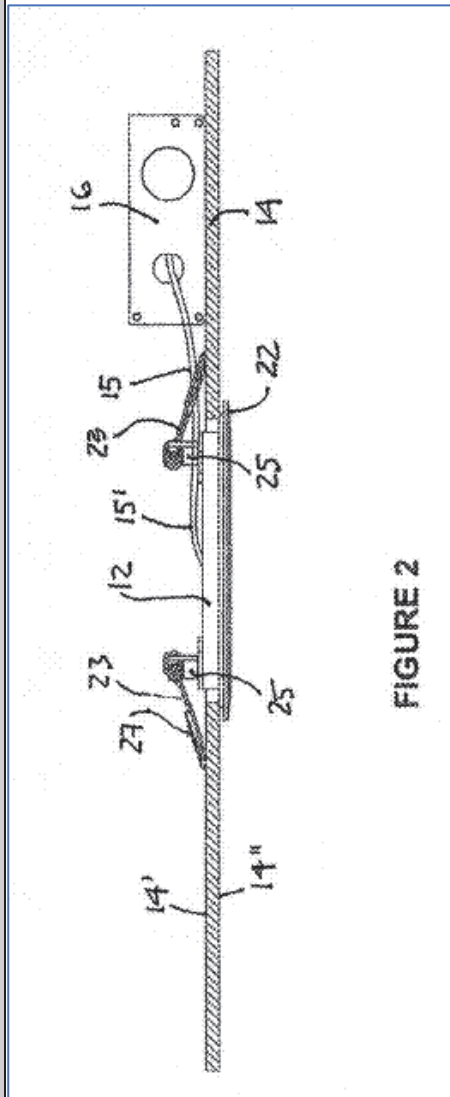
'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	Further, "[t]he lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:54-57. Fig 34i shows a switch that includes 11 positions, including a first, second, third, fourth, and fifth position. While Fig. 34i shows a "dial" switch, Roberge discloses that "[a] slide mechanism can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	Reiff alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39. 

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Reiff at Fig. 9 (cropped). Further, Reiff discloses "[s]witch 66 has three positions, one position being the off position as shown in FIG. 2., one position operating the fluorescent lamp and one position operating the LEDS. Switch 66 slides into one of the three positions and is rotatable to control the intensity of the light source. Light 108 is illustrated as being provided with switch 66; however, any suitable type of switch may be used to operate the light." Reiff at 6:20-27. A POSA would understand that Reiff discloses a switch with a fourth and fifth position, in addition to the three disclosed by Reiff. Thus, Reiff discloses the limitations recited in claim 5 of the '336 Patent. To the extent that Reiff does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, the switch of Fig. 34i of Roberge includes 11 positions, including first (2700K), second (3000K), third (3500K), fourth (4000K), fifth (4500K), and sixth positions (5000K):  Fig. 34i 3414 ① 2700K ② 3000K ③ 3500K ④ 4000K ⑤ 4500K ⑥ 5000K 5000K 5500K 6000K 6500K 7000K 8000K

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Roberge at Fig. 34i (annotated). Roberge discloses that the eleven temperatures are exemplary. Roberge at 42:51-65. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Reiff alone, or in combination with other prior art references renders obvious claim 7 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39, Fig. 9. Reiff at Fig. 9 (cropped).

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Further, Reiff discloses an electrical cable in the form of an electrical cord 56: "Electrical cord 56 extends from end cap 24 having control box 64 located along the cord." Reiff at 5:20-21. "Extending from end cap 22 is electrical cord 56 having plug 58 at a distal end of the cord for insertion into a conventional electrical outlet." Reiff at 7:22-24. Thus, Reiff discloses the limitations recited in claim 7 of the '336 Patent.
9. "The luminaire of claim 1, wherein the switch is a slide switch."	Reiff discloses claim 9 of the '336 Patent. For example, Reiff discloses "[s]witch 66 has three positions, one position being the off position as shown in FIG. 2., one position operating the fluorescent lamp and one position operating the LEDS. Switch 66 slides into one of the three positions and is rotatable to control the intensity of the light source. Light 108 is illustrated as being provided with switch 66; however, any suitable type of switch may be used to operate the light." Reiff at 6:20-27. A POSA would understand that Reiff discloses a slide switch as one of the many suitable types of switches to operate the light. Thus, Reiff discloses a slide switch as recited in claim 9 of the '336 Patent.
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	Reiff discloses claim 11 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39, Fig. 9.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Reiff at Fig. 9 (cropped). Thus, Reiff discloses a switch that is inaccessible when the housing is installed as recited in claim 11 of the '336 Patent. To the extent that Reiff does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell. For example, the switch 18 is inaccessible when housing is installed. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); <i>see also id.</i> at Fig. 2.



Further, the LED fixture is “adapted to be removably secured in a housing mounting hole in a ceiling sheeting material,” the “selector switch 18 is mounted [in/]on the cable 15” (Chaimberg at Abstract, 3:49-54), and the selector switch 18 “is made accessible and visible by simply withdrawing the light fixture from” the ceiling. *Id.*, Abstract. When the light fixture is “retracted from its fixture mounting hole,” the switch 18 is below the ceiling 14 and accessible to the user. *Id.*, 3:13-15, Fig. 1. Fig. 2 shows the light fixture “mounted in the fixture mounting hole.” *Id.*, 2:58-61, Fig. 2. The cable 15 (where the switch 18 is mounted) is on the inner side of the “ceiling sheeting material 14” and inaccessible when the LED light fixture is installed. *Id.*, 4:16-29, Fig. 2.

Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19.

Further, Halliwell discloses “the switch disposed within the second cavity” of the junction box. Halliwell discloses that “the remote switch 40 may be a . . . junction box mounted toggle switch . . . in wired communication with the switch control unit 35.” Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (*see* Halliwell at 7:8-19), and a POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements.

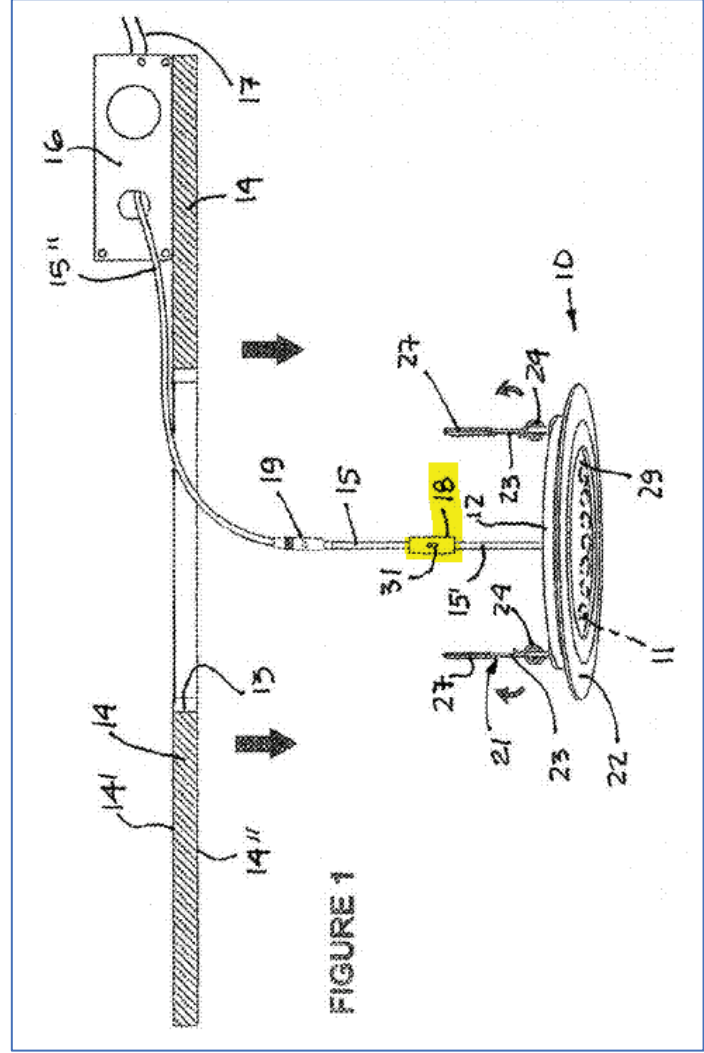
Further, a POSA would have understood that because the CCT switch is mounted in the junction box, it is inaccessible to the user when the LED housing is installed in the ceiling. Moreover, Halliwell

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	discloses that "a user may select a desired operating light aspects or qualities (e.g., color temperature...) for the ... LED lighting device before the ... LED lighting device is installed" in a ceiling, confirming that the switch will be inaccessible after the LED lighting device is installed. Halliwell at 4:31-35. Accordingly, Reiff alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."	Reiff discloses claim 12 of the '336 Patent. For example, Reiff discloses "[l]ights may be provided with control box 64 which includes a switch of any suitable type for turning the light on and off and selecting different light sources 28. Then, either a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected. Referring to FIGS. 1 and 2, control box 64 may include switch 66 which is a stepped dimmer switch linearly slidable in slot 68 to select light source 28 and rotatable to control the brightness of light source 28. Referring to FIG. 9, control box 64 may include light source selector switch 70 and dimmer knob 72 rotatable to control the brightness of the selected light source 28." Reiff at 4:28-39, Fig. 9. Reiff at Fig. 9 (cropped).

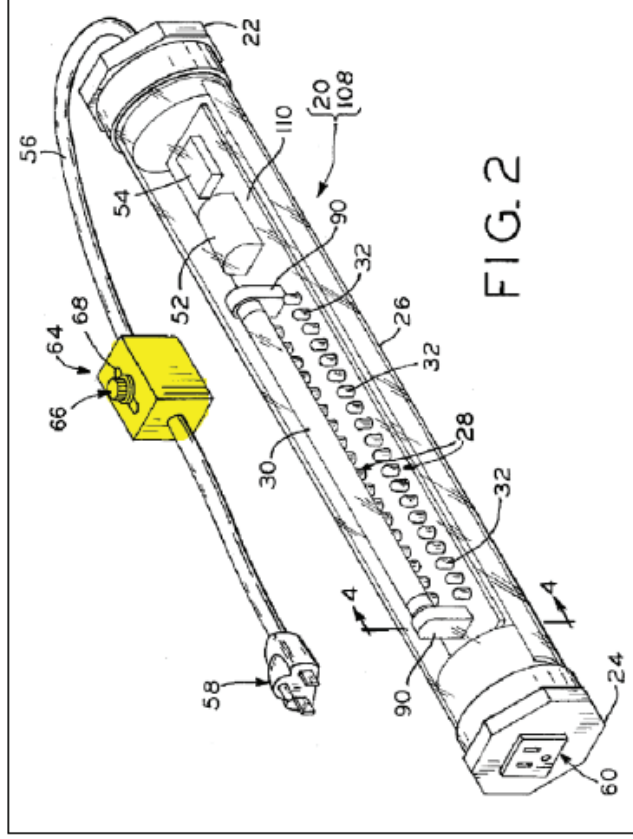
Thus, Reiff discloses a switch that is inaccessible when the housing is removed from the installed location as recited in claim 12 of the '336 Patent.

To the extent that Reiff does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell.

For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); *see also id.* at 1:8-15 ("The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED's of different correlated color temperature (CCT) and wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole."); Fig. 1.



'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Further, the CCT switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is "accessible and visible" to the user when the housing is removed from its installed location (<i>id.</i>, Abstract, 4:16-29). Fig. 1. Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Accordingly, Reiff alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	To the extent the preamble is limiting, Reiff discloses the preamble of claim 13 of the '336 Patent. For example, Reiff discloses a number of lighting devices that "include[] fluorescent and/or LED light sources," "wherein the color of the emitted light can easily be switched." Reiff at Abstract. The exemplary light device shown in Fig. 2 includes both LED light sources and a fluorescent light source. Reiff at 2:45-46. The light includes a "control box 64 which includes a switch for ... selecting between the different light sources ... [E]ither a regular white light fluorescent light source can be selected, or a 'colored' LED light source can be selected." Reiff at 4:28-36. The "switch 66 [] is a stepped dimmer switch linearly slidable in slot 68 to select a light source 28." Reiff at 4:28-36. "Each of the light sources emits a different color of light," thus, each light source emits light at a different CCT. Reiff at 2:19-22. The control box, including the switch, are highlighted in yellow in Fig. 2 below.



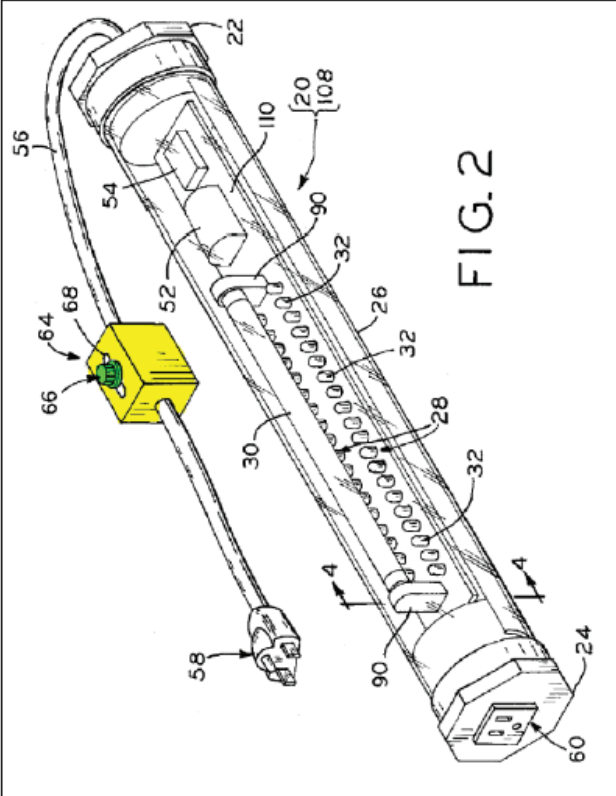
Reiff at Fig. 2 (color added).

Thus, Reiff discloses a body as recited in element 13[a] of the '336 Patent.

Reiff discloses element 13[b] of claim 13 of the '336 Patent.

For example, as shown in Fig. 2, when Reiff's light "is powered by conventional 120-volt power, electrical cord 56 extends from one end 22 of the light" and has a "plug 58 at a distal end of the cord for insertion into a conventional electrical outlet." Reiff at 4:16-19. As shown above and below, Reiff's control box 64 is "[l]ocated along electrical cord 56 [which] extend[s] from end cap 22" and is connected to the light device. Reiff at 6:18-20. The control box 64 (and switch 66) is highlighted in yellow below and the electrical cord 56 is highlighted in blue in Fig. 2 below. Because the control box 64 is located on the electrical cable 56, it is necessarily electrically coupled to electrical cable 56, and therefore must include at least one coupling feature.

13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 2 Reiff at Fig. 2 (colors added). Thus, Reiff discloses element 13[c] of claim 13 of the '336 Patent. Reiff discloses element 13[d] of claim 13 of the '336 Patent. For example, Reiff's control box switch includes "three positions, one position being the off position as shown in Fig. 2, one position operating the fluorescent lamp and one position operating the LEDs. Switch 66 slides into one of the three positions." Reiff at 6:20-24. Moreover, "[e]ach of the light sources emits a different color of light," so, each light source emits light at a different CCT. Reiff at 2:19-22. Accordingly, Reiff's control box switch is a switch "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire," as recited in element 13[d] of claim 13 of the '336 Patent.
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
15. "The switch of claim 13, wherein each position is discrete within the range of positions."	Reiff discloses claim 15 for the reasons discussed above with respect to claim 3. See claim 3 above.
16. "The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Reiff alone, and/or in view of the other cited prior art references renders obvious claim 16 for the reasons discussed above with respect to claim 4. See claim 4 above. To the extent that Reiff does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, Roberge discloses a switch with five positions. Fig. 34i shows "a dial [switch that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light" Roberge at 42:51-54, Fig. 34i.
	Fig. 34i is a diagram of a circular dial, labeled 3414, which is part of a lighting fixture. The dial features five distinct positions, each marked with a circled number and a corresponding color temperature in Kelvin (K). The positions are arranged in a semi-circular arc on the right side of the dial. From bottom to top, the positions are: 1 (2700K), 2 (3000K), 3 (3500K), 4 (4000K), and 5 (4500K). A central vertical line or pointer is shown, indicating the current position. The dial is mounted on a rectangular base. Roberge at Fig. 34i (annotated). Further, "[t]he lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:54-57. Fig 34i shows a switch that includes 11 positions, including a first, second, third, fourth, and fifth position. While Fig. 34i shows a "dial" switch, Roberge discloses that "[a] slide mechanism can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59.

'336 Claim/Element	U.S. Patent No. 7,192,160 ("Reiff") Alone And/Or in View of The Secondary References Identified Above
	Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
19. "The switch of claim 13, wherein the body is configured to be disposed within a junction box."	Reiff alone, and/or in view of the other cited prior art references renders obvious claim 19 for the reasons discussed above with respect to claim 7. See claim 7 above.

U.S. Patent No. 10,278,250 (“Cree”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 10,278,250 (“Cree”)

Secondary Reference(s): U.S. Patent No. 9,801,250 (“Halliwell”); U.S. Patent No. 10,234,091 (“Chaimberg”).

’336 Claim/Element	U.S. Patent No. 10,278,250 (“Cree”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Cree discloses the preamble of claim 1 of the ’336 Patent. For example, Cree “disclosure relates to a lighting fixture that is capable of providing white light over an extended range of correlated color temperatures.” Cree at Abstract. Thus, Cree discloses a luminaire as recited in the preamble of claim 1 of the ’336 Patent.
1[a]. “a housing comprising at least one outer surface that forms a first cavity,”	Cree discloses element 1[a] of claim 1 of the ’336 Patent. For example, Cree discloses that in “reference to FIGS. 2 and 3, an electronics housing 26 is shown mounted at one end of the lighting fixture 10, and is used to house all or a portion of the electronics used to power and control the LED array 20.” Cree at 7:8-11. FIG. 2 FIG. 3 Cree at Figs. 2, 3.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"	Thus, Cree discloses a housing as recited in element 1[a] of the '336 Patent. Cree discloses element 1[b] of claim 1 of the '336 Patent. For example, Cree discloses that in "reference to FIGS. 2 and 3, an electronics housing 26 is shown mounted at one end of the lighting fixture 10, and is used to house all or a portion of the electronics used to power and control the LED array 20. These electronics are coupled to the LED array 20 through appropriate cabling 28. With reference to FIG. 4, the electronics provided in the electronics housing 26 may be divided into a driver module 30 and a communications module 32." Cree at 7:8-16. FIG. 2 FIG. 4 Cree at Figs. 2, 4. Thus, Cree discloses an electrical component as recited in element 1[b] of the '336 Patent.
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	Cree discloses element 1[c] of claim 1 of the '336 Patent. For example, Cree discloses that in "reference to FIGS. 2 and 3, an electronics housing 26 is shown mounted at one end of the lighting fixture 10, and is used to house all or a portion of the electronics used to

'336 Claim/Element

U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above

power and control the LED array 20. These electronics are coupled to the LED array 20 through appropriate cabling 28. With reference to FIG. 4, the electronics provided in the electronics housing 26 may be divided into a driver module 30 and a communications module 32.” Cree at 7:8-16.

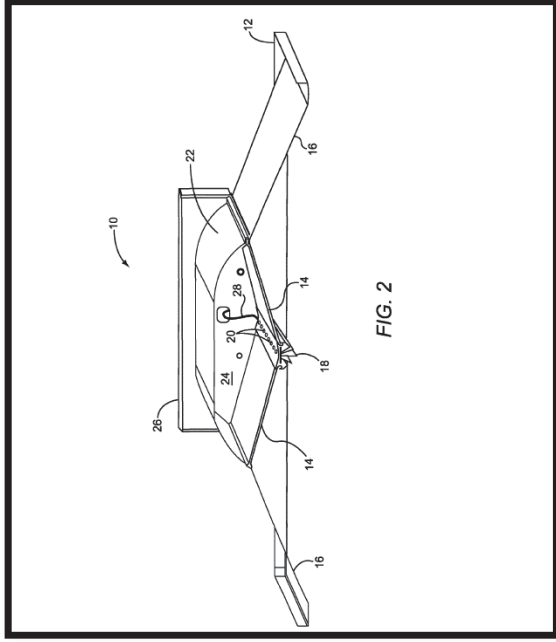


FIG. 2

Cree at Figs. 2, 4.

Thus, Cree discloses an electrical cable as recited in element 1[c] of the '336 Patent.

1[d]. “a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,”

Cree discloses element 1[d-1] of claim 1 of the '336 Patent.

For example, Cree discloses “The correlated color temperature information may be received from another lighting fixture, a commissioning tool, a wall controller, or the like.” Cree at 5:57-60. Further, it discloses “[t]he communications module 32 may be mounted outside of the electronics housing 26 in an exposed fashion or within a supplemental housing 34, which may be directly or indirectly coupled to the outside of the electronics housing 26, as shown in FIG. 5.”

Cree also discloses “In the illustrated embodiment, the driver module 30 and the communications module 32 are coupled via communication and power buses, which may be separate or integrated with one another. The communication bus allows the communications module 32 to receive information from the

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	driver module 30 as well as control the driver module 30. An exemplary communication bus is the well-known inter-integrated circuitry (I2C) bus, which is a serial bus and is typically implemented with a two-wire interface employing data and clock lines. Other available buses include: serial peripheral interface (SPI) bus, Dallas Semiconductor Corporation's I-Wire serial bus, universal serial bus (USB), RS-232, Microchip Technology Incorporated's UNI/O®, and the like." Cree at 10:60-11:6. Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Lastly, Cree also discloses that with "reference to FIG. 18, an exemplary wall controller 126 is illustrated. The wall controller 126 is shown in this embodiment with three buttons: an on-off button 130, a dimming button 132, and a CCT button 134. As will be described further below, the wall controller 126 may be hardwired to one or more lighting fixtures 10 or be configured to wirelessly communicate directly or indirectly with one or more lighting fixtures 10." Cree at 21:38-45. Also, the "wired communication interface 158 is designed to be directly wired to at least one of the associated lighting fixtures 10 and send the control signals over the wired connection." Cree at 26:24-28. Thus, Cree discloses the remotely disposed switch as recited in element 1[d] of the '336 Patent.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Cree discloses element 1[e] of claim 1 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	Further, "For example, the wall controller 126 may receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels to 5000 K and 3000 K, respectively. Assume the corresponding maximum and minimum dimming levels, which are 100% and 5%, respectively. Once the CCT levels are set, the wall controller 126 will send instructions to the lighting fixtures 10 to transition the CCT level from 3000 K to 5000 K as the dimming level changes from the minimum dimming level (5%) to the maximum dimming level (100%). The CCT levels and dimming levels will vary from application to application. Further, the lower dimming levels need not be associated with lower CCT. FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136 and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 25:3-31.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	FIG. 22 Cree at Fig. 22. Thus, Cree discloses a switch with a plurality of positions with corresponding CCT levels as recited in element 1[e] of the '336 Patent.
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Cree discloses claim 3 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Further, "For example, the wall controller 126 may receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels to 5000 K and 3000 K, respectively. Assume the corresponding maximum and minimum dimming levels, which are 100% and 5%, respectively. Once the CCT levels are set, the wall controller 126 will send instructions to the lighting fixtures 10 to transition the CCT level from 3000 K to 5000 K as the dimming level changes from the minimum dimming level (5%) to the maximum dimming level (100%). The CCT levels and dimming levels will vary from application to application. Further, the lower dimming levels need not be associated with lower CCT. FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136 and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 25:3-31.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	FIG. 22 Cree at Fig. 22. Thus, Cree discloses a switch with discrete positions as recited in claim 3 of the '336 Patent. Cree alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Cree discloses "FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 25:16-31. Further, Cree discloses "[t]he CCT button 134 is used to vary the CCT of the light output of the associated lighting fixture(s) 10. For the CCT button 134, pressing the top half will result in the wall controller 126 sending a signal to increase the CCT level of the associated lighting fixture(s) 10. Pressing the bottom half of the CCT button 134 will result in the wall controller sending a signal to decrease the CCT level of the associated lighting fixture(s) 10. With each press of the top half or bottom half of the CCT button 134, the associated lighting fixture(s) 10 may be instructed to increase or decrease their CCT by a defined amount. For example, each press of the top half or bottom half of the dimming button 132 may result in an increase or decrease of the CCT of the light output of the associated lighting fixture(s) 10 by 100 K. Alternately, each press could result in a 1, 5, 10, 50, 100, 250, or 500 K change in light output." Cree at 22:64-23:12. Lastly, Cree discloses "the user input interface 152 may include the various switches, rotary knobs, sliders, and buttons, such as the on-off button 130, dimming button 132, CCT button 134, first CCT button 144, second CCT button 146, and the like. The user input interface 152 may be arranged in various groups of switches, knobs, sliders, and buttons. The user input interface could also be a touch screen interface. The user output interface 154 may include the CCT LEDs 136, 142, other LEDs or indicators, a display, or the like. The display could form part of the touch screen interface." Cree at 25:63-26:5. Thus, Cree discloses the plurality of switch positions as recited in claim 4 of the '336 Patent.
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light	Cree alone, or in combination with other prior art references renders obvious claim 5 of the '336 Patent. For example, Cree discloses "The wall controller 126 allows a user to select a first CCT level for the maximum dimming level using the first CCT button 144 and a second CCT level for the minimum dimming level using the second CCT button 146. The respective first and second CCT LEDs 136, 142 are used to provide feedback for the current or selected maximum and minimum CCT levels, respectively. For example, the first and second CCT LEDs 136, 142 may be controlled to cycle through a series of colors that sweep from red to blue though white to indicate the relative CCT levels (i.e. 3000 K (red), 4000 K (white), and 5000 K (blue)). The wall controller 126 will thus receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels for the corresponding maximum and minimum dimming levels. Once the first and second CCT levels are identified, the CCT level of the lighting fixtures 10 will transition from the second CCT level to the first CCT level as the dimming level changes from the minimum dimming level to the maximum dimming level. For example, the wall

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	controller 126 may receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels to 5000 K and 3000 K, respectively. Assume the corresponding maximum and minimum dimming levels, which are 100% and 5%, respectively. Once the CCT levels are set, the wall controller 126 will send instructions to the lighting fixtures 10 to transition the CCT level from 3000 K to 5000 K as the dimming level changes from the minimum dimming level (5%) to the maximum dimming level (100%). The CCT levels and dimming levels will vary from application to application. Further, the lower dimming levels need not be associated with lower CCT. FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136 and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 24:51-25:31. Thus, Cree discloses the plurality of positions corresponding to CCT outputs as recited in claim 5 of the '336 Patent.
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Cree alone, or in combination with other prior art references renders obvious claim 7 of the '336 Patent. For example, Cree discloses "[w]ith reference to FIG. 18, an exemplary wall controller 126 is illustrated. The wall controller 126 is shown in this embodiment with three buttons: an on-off button 130, a dimming button 132, and a CCT button 134. As will be described further below, the wall controller 126 may be hardwired to one or more lighting fixtures 10 or be configured to wirelessly communicate directly or indirectly with one or more lighting fixtures 10." Cree at 21:38-45.

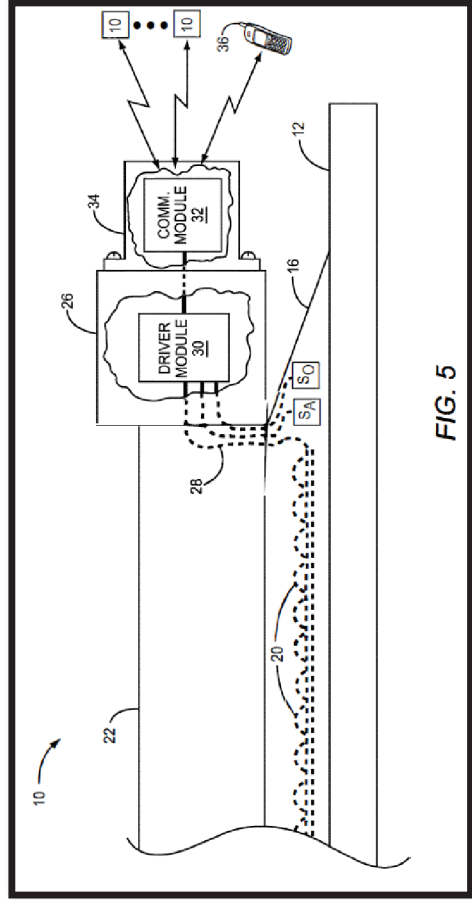
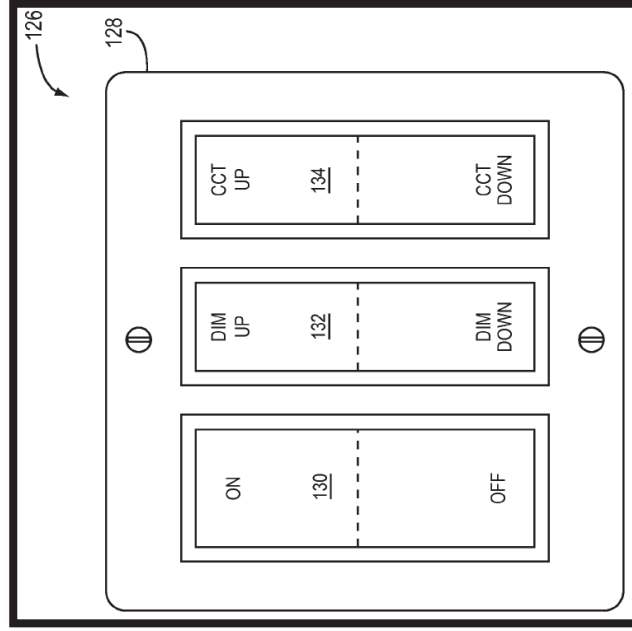


FIG. 5

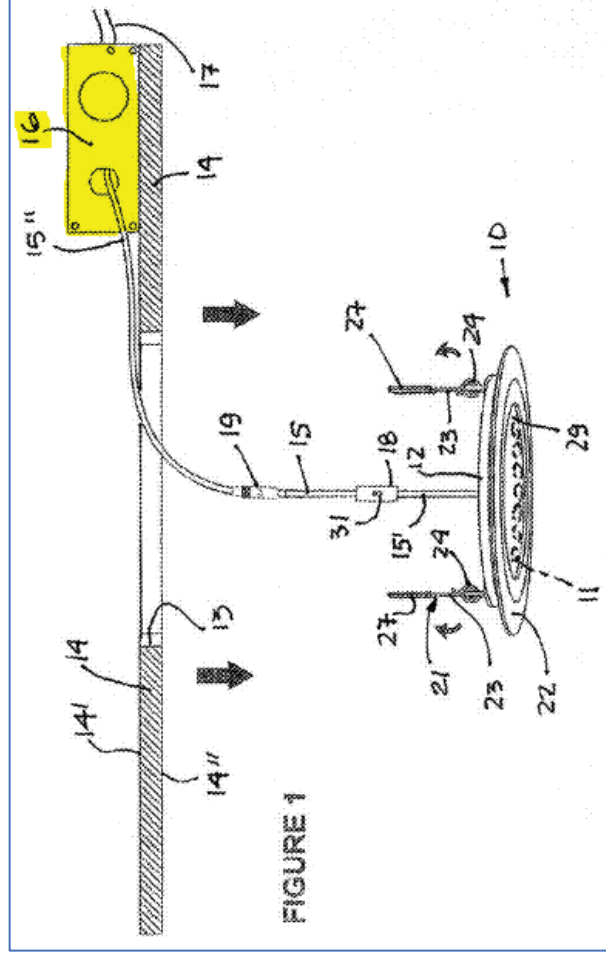


Cree at Figs. 5, 18.

Thus, Cree discloses the junction box as recited in claim 7 of the '336 Patent.

To the extent that Roberge does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell.

For example, the 'Chaimberg includes a driver housing 16 (*i.e.* a junction box) with an internal cavity, "the driver circuit 20 is mounted in the driver housing 16." Chaimberg at 3:23-24, 4:30-37. The driver circuit 20 controls the temperature output based on the setting of the switch 18. *See* Chaimberg at 4:30-37 ("With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions."); *see also id.* at Fig. 1.



While Chaimberg discloses that locating the CCT switch 18 on the electrical cable 15, away from the junction box (*i.e.* driver housing 16). A POSA would understand that Chaimberg discloses that the CCT switch 18 could be located on/in the driver housing 16.

Halliwell's "electrical components of the LED lighting device 20 (*e.g.*, the

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (see Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. A POSA also would have been motivated to place the switch inside the junction box to make the switch less accessible to users or visitors to the light fixture's installed location in certain business applications. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious an LED light fixture with "a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch" as recited in claim 7 of the '336 Patent.
9. "The luminaire of claim 1, wherein the switch is a slide switch."	Cree discloses claim 9 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Thus, Cree discloses a slide switch as recited in claim 9 of the '336 Patent.
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	Cree discloses claim 11 of the '336 Patent. For example, Cree discloses "With the embodiment of FIG. 4, adding or replacing the communications module 32 requires gaining access to the interior of the electronics housing 26. If this is undesirable, the driver module 30 may be provided alone in the electronics housing 26. The communications module 32 may be mounted outside of the electronics housing 26 in an exposed fashion or within a supplemental

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	housing 34, which may be directly or indirectly coupled to the outside of the electronics housing 26, as shown in FIG. 5. The supplemental housing 34 may be bolted to the electronics housing 26. The supplemental housing 34 may alternatively be connected to the electronics housing using snap-fit or hook-and-snap mechanisms. The supplemental housing 34, alone or when coupled to the exterior surface of the electronics housing 26, may provide a plenum rated enclosure." Cree at 8:4-18. Further, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one or more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Thus, Cree discloses the inaccessible switch as recited in claim 11 of the '336 Patent.
12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."	Cree discloses claim 12 of the '336 Patent. For example, Cree discloses "With the embodiment of FIG. 4, adding or replacing the communications module 32 requires gaining access to the interior of the electronics housing 26. If this is undesirable, the driver module 30 may be provided alone in the electronics housing 26. The communications module 32 may be mounted outside of the electronics housing 26 in an exposed fashion or within a supplemental housing 34, which may be directly or indirectly coupled to the outside of the electronics housing 26, as shown in FIG. 5. The supplemental housing 34 may be bolted to the electronics housing 26. The supplemental housing 34 may alternatively be connected to the electronics housing using snap-fit or hook-and-snap mechanisms. The supplemental housing 34, alone or when coupled to the exterior surface of the electronics housing 26, may provide a plenum rated enclosure." Cree at 8:4-18. Further, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one or more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	Thus, Cree discloses the accessible switch as recited in claim 12 of the '336 Patent. To the extent the preamble is limiting, Cree discloses the preamble of claim 13 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Further, "For example, the wall controller 126 may receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels to 5000 K and 3000 K, respectively. Assume the corresponding maximum and minimum dimming levels, which are 100% and 5%, respectively. Once the CCT levels are set, the wall controller 126 will send instructions to the lighting fixtures 10 to transition the CCT level from 3000 K to 5000 K as the dimming level changes from the minimum dimming level (5%) to the maximum dimming level (100%). The CCT levels and dimming levels will vary from application to application. Further, the lower dimming levels need not be associated with lower CCT. FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136 and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 25:3-31.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
	Cree at Fig. 22. Thus, Cree discloses the switch as recited in the preamble of claim 13 of the '336 Patent. Cree discloses element 13[a] of claim 13 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11.
13[a]. "a body;"	

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"	Thus, Cree discloses a body as recited in element 13[a] of the '336 Patent. Cree discloses element 13[b] of claim 13 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Further, Cree discloses that in "reference to FIGS. 2 and 3, an electronics housing 26 is shown mounted at one end of the lighting fixture 10, and is used to house all or a portion of the electronics used to power and control the LED array 20. These electronics are coupled to the LED array 20 through appropriate cabling 28. With reference to FIG. 4, the electronics provided in the electronics housing 26 may be divided into a driver module 30 and a communications module 30." Cree at 7:8-16. Thus, Cree discloses the coupling feature as recited in element 13[b] of the '336 Patent.
13[c]. "an actuator disposed on the body, wherein the actuator has a range of positions,"	Cree discloses element 13[c] of claim 13 of the '336 Patent. For example, Cree discloses "[t]he communications module 32 may have a status indicator, such as an LED 78 to indicate the operating state of the communication module. Further, a user interface 80 may be provided to allow a user to manually interact with the communications module 32. The user interface 80 may include an input mechanism, an output mechanism, or both. The input mechanism may include one or more of buttons, keys, keypads, touchscreens, or the like. The output mechanism may include one more LEDs, a display, or the like. For the purposes of this application, a button is defined to include a push button switch, all or part of a toggle switch, rotary dial, slider, or any other mechanical input mechanism." Cree at 12:66-13:11. Thus, Cree discloses the actuator as recited in element 13[c] of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	Cree discloses element 13[d] of claim 13 of the '336 Patent. For example, Cree discloses "The wall controller 126 allows a user to select a first CCT level for the maximum dimming level using the first CCT button 144 and a second CCT level for the minimum dimming level using the second CCT button 146. The respective first and second CCT LEDs 136, 142 are used to provide feedback for the current or selected maximum and minimum CCT levels, respectively. For example, the first and second CCT LEDs 136, 142 may be controlled to cycle through a series of colors that sweep from red to blue though white to indicate the relative CCT levels (i.e. 3000 K (red), 4000 K (white), and 5000 K (blue)). The wall controller 126 will thus receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels for the corresponding maximum and minimum dimming levels. Once the first and second CCT levels are identified, the CCT level of the lighting fixtures 10 will transition from the second CCT level to the first CCT level as the dimming level changes from the minimum dimming level to the maximum dimming level. For example, the wall controller 126 may receive user input via the first and second CCT buttons 144, 146 to set the first and second CCT levels to 5000 K and 3000 K, respectively. Assume the corresponding maximum and minimum dimming levels, which are 100% and 5%, respectively. Once the CCT levels are set, the wall controller 126 will send instructions to the lighting fixtures 10 to transition the CCT level from 3000 K to 5000 K as the dimming level changes from the minimum dimming level (5%) to the maximum dimming level (100%). The CCT levels and dimming levels will vary from application to application. Further, the lower dimming levels need not be associated with lower CCT. FIG. 22 illustrates another variation on the concepts of FIG. 21. In this embodiment, the first and second CCT LEDs 136 and 142 are each formed by an array of LEDs. The LEDs in each array may be different colored LEDs or may be controlled to emit different colors of light, which may again transition from red to blue through white or other color spectrum. For example, if the arrays of LEDs have five individual LEDs as shown, the LEDs of the array of LEDs may transition from left to right as follows: red, yellow, white, green, and blue, wherein the CCT level associated with each LEDs transitions from the minimum CCT level for red to the maximum CCT level for blue. Again, the first and second CCT buttons 144 and 146 need not be integrated with the first and second CCT LEDs 136 and 142. Further, certain buttons on the wall controller 126 may support multiple functions and modes." Cree at 24:51-25:31. Thus, Cree discloses the actuator positions as recited in element 13[d] of the '336 Patent.
15. "The switch of claim 13, wherein each position is discrete within the range of positions."	Cree discloses claim 15 for the reasons discussed above with respect to claim 3. See claim 3 above.

'336 Claim/Element	U.S. Patent No. 10,278,250 ("Cree") Alone And/Or in View of The Secondary References Identified Above
16. "The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Cree alone, and/or in view of the other cited prior art references renders obvious claim 16 for the reasons discussed above with respect to claim 4. See claim 4 above.
19. "The switch of claim 13, wherein the body is configured to be disposed within a junction box."	Cree alone, and/or in view of the other cited prior art references renders obvious claim 19 for the reasons discussed above with respect to claim 7. See claim 7 above.

U.S. Patent No. 9,801,250 (“Halliwell”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 9,801,250 (“Halliwell”)

Secondary Reference(s): U.S. Patent No. 10,234,091 (“Chaimberg”); and U.S. Patent No. 7,192,160 (“Reiff”).

’336 Claim/Element	U.S. Patent No. 9,801,250 (“Halliwell”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Halliwell discloses the preamble of claim 1 of the ’336 Patent. Halliwell states that “the LED lighting device 20 may be a lighting fixture, a luminaire, ... and/or the like.” Halliwell at 6:36-42. Thus, Halliwell’s LED lighting devices disclose the “luminaire” recited in the preamble of claim 1 of the ’336 Patent.
1[a]. “a housing comprising at least one outer surface that forms a first cavity;”	Halliwell discloses element 1[a] of claim 1 of the ’336 Patent. For example, Halliwell’s LED lighting device includes a “device housing 24” that “may be configured to house ... one or more LED packages 18. . . .” Halliwell at 6:51-56. FIG. 2

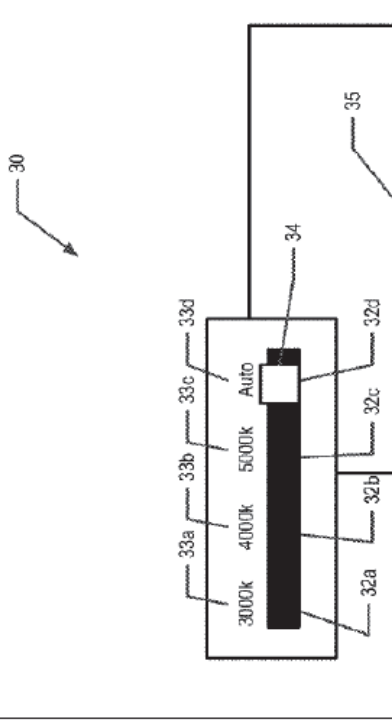
'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Halliwell at Fig. 2 (color added). Further, as shown Fig. 2, the device housing 24 (highlighted in yellow) forms a cavity wherein the one or more LEDs 18, driver circuit 19, and device lens 22 are located. Halliwell at Fig. 2. Thus, Halliwell discloses a housing comprising at least one outer surface that forms a first cavity as recited in element 1[a] of the '335 Patent.
1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"	Halliwell discloses element 1[b] of claim 1 of the '336 Patent. For example, Halliwell's "driver circuitry 19 [and] one or more LED packages 18" are electric components mounted in the above-described device housing." Halliwell at 6:51-56. The LED packages 18a and 18b (blue) and driver circuitry 19 (green) are disposed at least in part within the first cavity formed by the device housing 24 (yellow): FIG. 2 Halliwell at Fig. 2 (colors added).

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Thus, Halliwell discloses one or more LED packages (i.e., electrical components) disposed within the first cavity formed by the device housing as recited in element 1[b] of the '335 Patent.
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	Halliwell discloses element 1[c] of claim 1 of the '336 Patent. For example, Halliwell discloses that "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g., through a junction box)." Halliwell at 7:8-19. Further, a POSA would have understood that the switch depicted in Fig. 4 would function as the "junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell at Fig. 4. Thus, Halliwell discloses an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component as recited in element 1[c] of the '335 Patent.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Thus, Halliwell discloses a switch disposed remotely from the housing coupled to an electrical cable as recited in element 1[d] of the '336 Patent. To the extent that Halliwell does not explicitly disclose one or more portions of this claim element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below. For example, Chaimberg discloses the switch 18 is mounted on the electrical cable 15. <i>See</i> Chaimberg at 3:49-60 ("As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15 and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); <i>see also id.</i> at Fig. 1. Thus, the switch 18 of Chaimberg is "a switch coupled to the electrical cable [15], wherein the switch is disposed remotely from the housing" as recited in element 1[d] of claim 1 of the '336 Patent. And Reiff discloses the electrical cord "extends from end cap 24 having control box 64 located along the cord. Control box 64 includes switch 66 which is rotatable to control the intensity of light source 28." '160 Patent at 5:20-23. As shown in Figure 1 below, the switch 66 is located remotely from the housing 26.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Thus, Reiff discloses a remotely disposed switch coupled to the electrical cable as recited in element 1[d] of the '336 Patent.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Halliwell discloses element 1[e] of claim 1 of the '336 Patent. For example, Halliwell's exemplary CCT "switch 30 may comprise a plurality of switch positions," including "two, three, four, five, six, seven, eight or more switch positions . . ." Halliwell at 11:55-67.

FIG. 4



Halliwell at Fig. 4 (cropped).

Further, the exemplary switch shown in Fig. 4 includes four positions that “correspond to set operating color temperature modes with each position corresponding to a particular set operating color temperature,” including 3000K, 4000K, and 5000K. Halliwell at 12:10-15, 13:4-15, Fig. 4. These three color temperature outputs are discrete.

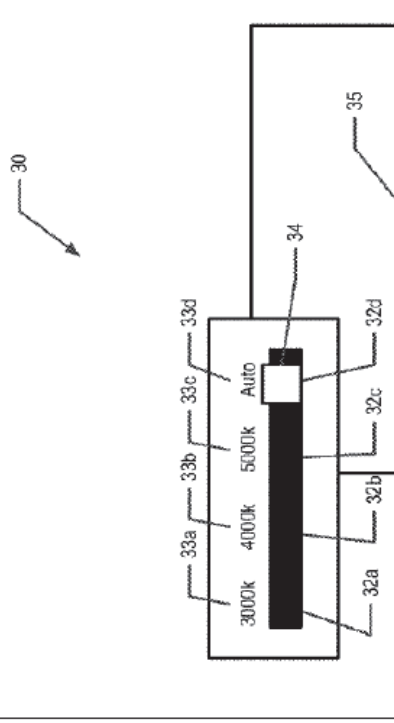
Thus, Halliwell discloses a switch with a plurality of positions corresponding to discrete CCT outputs as recited in element 1[e] of the '336 Patent.

3. “The luminaire of claim 1, wherein each position of the plurality of positions is discrete.”

Halliwell discloses claim 3 of the '336 Patent.

For example, Halliwell's exemplary CCT “switch 30 may comprise a plurality of switch positions,” including “two, three, four, five, six, seven, eight or more switch positions” Halliwell at 11:55-67.

FIG. 4



Halliwell at Fig. 4 (cropped).

Further, the exemplary switch shown in Fig. 4 includes four positions that "correspond to set operating color temperature modes with each position corresponding to a particular set operating color temperature," including 3000K, 4000K, and 5000K. Halliwell at 12:10-15, 13:4-15, Fig. 4.

Thus, Halliwell discloses a switch with a plurality of positions corresponding to discrete CCT outputs as recited in claim 3 of the '336 Patent.

4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."

Halliwell alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent.

For example, Halliwell's exemplary CCT "switch 30 may comprise a plurality of switch positions," including "two, three, four, five, six, seven, eight or more switch positions" Halliwell at 11:55-67.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K	Halliwell at Fig. 4 (cropped). Further, the exemplary switch shown in Fig. 4 includes four positions that “correspond to set operating color temperature modes with each position corresponding to a particular set operating color temperature,” including 3000K, 4000K, and 5000K. Halliwell at 12:10-15, 13:4-15, Fig. 4. Thus, Halliwell discloses a switch with a plurality of positions corresponding to discrete CCT outputs as recited in claim 4 of the '336 Patent.
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K	Halliwell alone, or in combination with other prior art references renders obvious claim 5 of the '336 Patent. For example, Halliwell discloses that the exemplary CCT “switch 30 may comprise a plurality of switch positions,” including “two, three, four, five, six, seven, eight or more switch positions . . . ” Halliwell at 11:55-67. Halliwell further discloses that its LEDs “may be configured to emit light of at least one of 2700K, 3000K, 3500K, 4000K, 5000K, . . . and/or other color temperatures, as appropriate for the application.” Halliwell at 7:61-67. Further, if configured with these five positions as disclosed in Halliwell, a POSA would have understood that the junction box mounted CCT switch would need to have five positions, one for each CCT output.

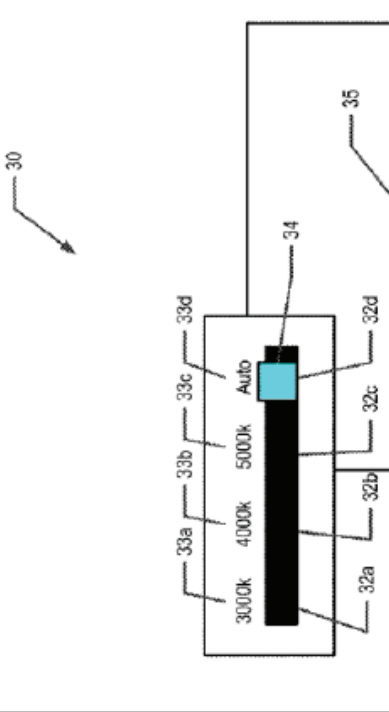
'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	Thus, Halliwell discloses the various switch positions and corresponding outputs as recited in claim 5 of the '336 Patent.
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Halliwell alone, or in combination with other prior art references renders obvious claim 7 of the '336 Patent. For example, Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. A POSA also would have been motivated to place the switch inside the junction box to make the switch less accessible to users or visitors to the light fixture's installed location in certain business applications. Thus, Halliwell discloses the junction box as cited in claim 7 of the '336 Patent.
9. "The luminaire of claim 1, wherein the switch is a slide switch."	Halliwell discloses claim 9 of the '336 Patent. For example, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Thus, the '250 discloses that the switch can be mounted in or on the junction box, i.e., disposed within the cavity of the junction box. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Further, a POSA would have understood that a switch, like the slide switch shown in Fig. 4, would have been placed in the junction box as the "junction box mounted" CCT switch. Halliwell at 13:43-45 ("[t]he

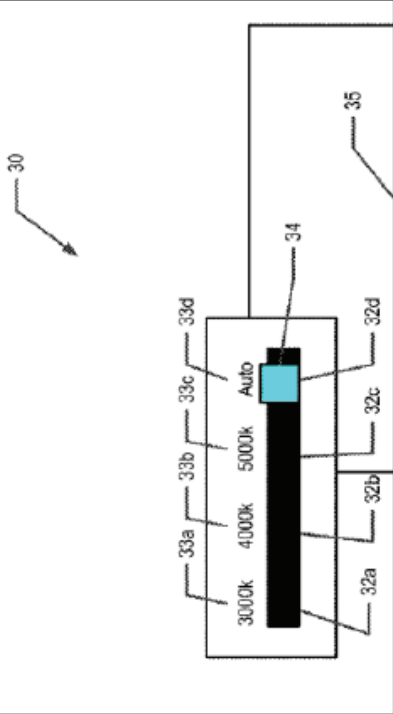
'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	switch 30 [in Fig. 4] has been illustrated herein as a slider switch"); 11:46-47 ("the switch 30 may comprise a slide switch"); 18:31-31 ("the remote selector 44 may be a slide ... button."). Thus, Halliwell discloses a slide switch as recited in claim 9 of the '336 Patent.
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	Halliwell discloses claim 11 of the '336 Patent. For example, Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and a POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Further, a POSA would have understood that because the CCT switch is mounted in the junction box, it is inaccessible to the user when the LED housing is installed in the ceiling. Moreover, Halliwell discloses that "a user may select a desired operating light aspects or qualities (e.g., color temperature...) for the ... LED lighting device before the ... LED lighting device is installed" in a ceiling, confirming that the switch will be inaccessible after the LED lighting device is installed. Halliwell at 4:31-35. Thus, Halliwell discloses the switch being inaccessible when the housing is installed as recited in claim 11 of the '336 Patent.
12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."	Halliwell discloses claim 12 of the '336 Patent. For example, Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	other electrical components (e.g., electrical cables and connections) inside the junction box (see Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Thus, Halliwell discloses an accessible switch when the housing is removed as recited in claim 12 of the '336 Patent.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	To the extent the preamble is limiting, Halliwell discloses the preamble of claim 13 of the '336 Patent. For example, Halliwell discloses that its LED luminaire includes a CCT switch. Halliwell at 12:60-13:14): Halliwell at Fig. 4 (cropped). Further, the exemplary CCT switch 30 includes four positions corresponding to four "color temperature mode[s]," including 3000K, 4000K, and 5000K. Halliwell at 12:60-13:14, Fig. 4. As discussed, a POSA would have understood that Halliwell's LED luminaire would use a switch, like the one disclosed in Fig. 4 as the "junction box mounted" CCT switch. Halliwell at 17:39-42.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Thus, Halliwell discloses a switch controlling the CCT of light emitted by the luminaire as recited in the preamble of claim 13 of the '336 Patent.
13[a]. "a body;"	Halliwell discloses element 13[a] of claim 13 of the '336 Patent. For example, Halliwell's exemplary CCT switch 30 includes a body, which is highlighted in yellow in Fig. 4 below. Halliwell at Fig. 4 (color added). Thus, Halliwell discloses a CCT switch with "a body" as recited in element 13[a] of the '336 Patent.
13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"	Halliwell discloses element 13[b] of claim 13 of the '336 Patent. As noted above, a POSA would have understood that Halliwell's LED light fixture would use a switch, like the switch disclosed in Fig. 4, as the "junction box mounted" CCT switch. Halliwell at 17:39-42. Further, Halliwell also discloses that the "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	Thus, Halliwell discloses the coupling feature as recited in element 13[b] of the '336 Patent. To the extent that Halliwell does not explicitly disclose one or more portions of this claim element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below. For example, Chaimberg discloses the switch 18 is mounted on the electrical cable 15. <i>See</i> Chaimberg at 3:49-60 ("As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15 and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); <i>see also id.</i> at Fig. 1. Thus, the switch 18 of Chaimberg is "a switch coupled to the electrical cable [15], wherein the switch is disposed remotely from the housing" as recited in element 1[d] of claim 1 of the '336 Patent. And Reiff discloses the electrical cord "extends from end cap 24 having control box 64 located along the cord. Control box 64 includes switch 66 which is rotatable to control the intensity of light source 28." '160 Patent at 5:20-23. As shown in Figure 1 below, the switch 66 is located remotely from the housing 26.

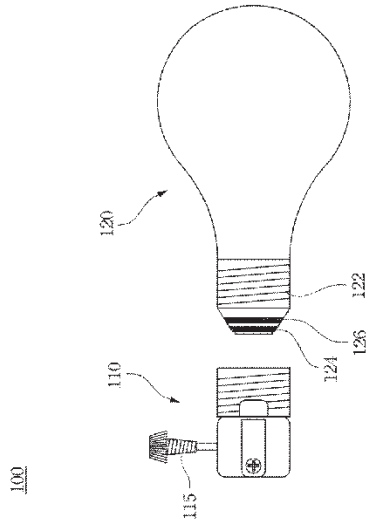
'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	FIG. 4  Halliwell at Fig. 4 (color added). Further, the '336 Patent likewise depicts an actuator (673) as a button that the user can slide "along the length" of a slot within the body of a switch (631) ('336 Patent at 10:17-20) like the slide button disclosed in Halliwell. Thus, Halliwell discloses an actuator with a range of positions disposed on the body as recited in element 13[c] of the '336 Patent.
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	Halliwell discloses element 13[d] of claim 13 of the '336 Patent. For example, as shown in Fig. 4, the exemplary CCT switch 30 includes an actuator (highlighted blue) that can be set four positions including 3000K, 4000K, and 5000K. Halliwell at 12:60-13:14, Fig. 4.

'336 Claim/Element	U.S. Patent No. 9,801,250 ("Halliwell") Alone And/Or in View of The Secondary References Identified Above
	FIG. 4  Halliwell at Fig. 4 (color added). Thus, Halliwell discloses a CCT switch “wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire,” as recited in element 13[d] of the '336 Patent.
15. “The switch of claim 13, wherein each position is discrete within the range of positions.”	Halliwell discloses claim 15 for the reasons discussed above with respect to claim 3. See claim 3 above.
16. “The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position.”	Halliwell alone, and/or in view of the other cited prior art references renders obvious claim 16 for the reasons discussed above with respect to claim 4. See claim 4 above.
19. “The switch of claim 13, wherein the body is configured to be disposed within a junction box.”	Halliwell alone, and/or in view of the other cited prior art references renders obvious claim 19 for the reasons discussed above with respect to claim 7. See claim 7 above.

U.S. Patent No. 8,890,436 (“Chou”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 8,890,436 (“Chou”).

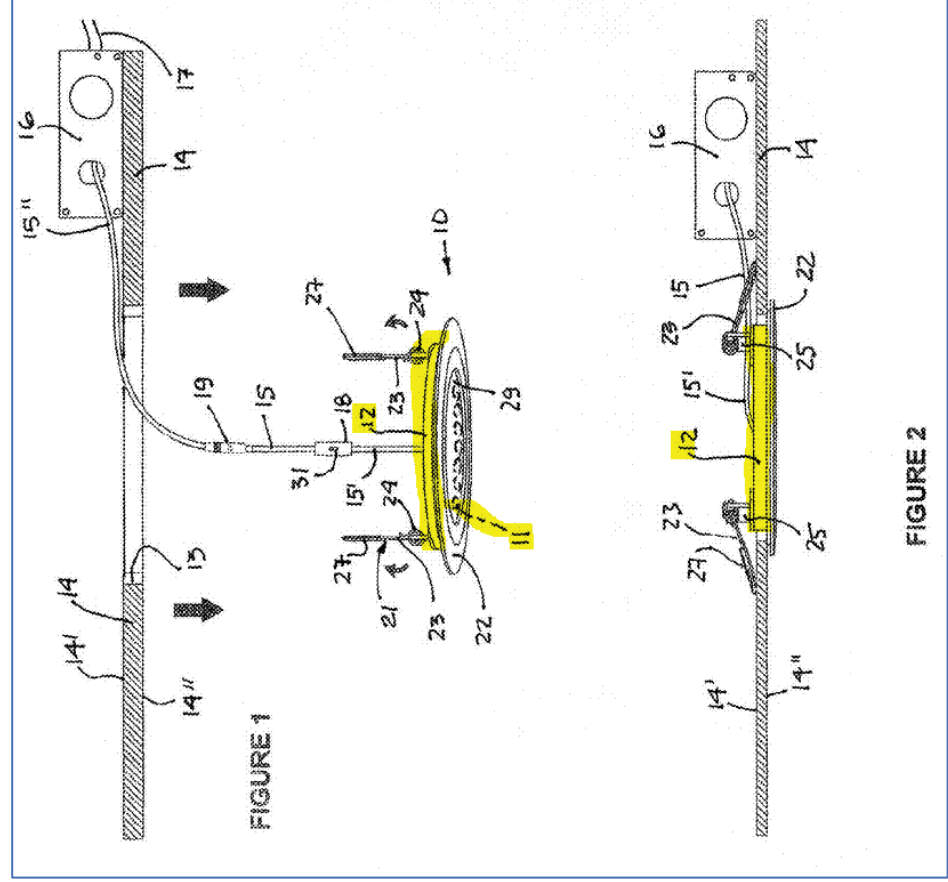
Secondary Reference(s): U.S. Patent No. 7,014,336 (“Ducharme”); U.S. Patent No. 10,091,855 (“Van Winkle”); U.S. Patent No. 9,801,250 (“Halliwell”); U.S. Patent No. 7,178,941 (“Roberge”); U.S. Patent No. 10,136,503 (“Chen”); U.S. Patent No. 10,234,091 (“Chaimberg”).

’336 Claim/Element	U.S. Patent No. 8,890,436 (“Chou”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Chou discloses a luminaire. <i>See e.g., Chou at Abstract:</i> “A color temperature adjustable LED lamp is disclosed . . .”
1[a]. “a housing comprising at least one outer surface that forms a first cavity;”	Chou discloses a housing comprising at least one outer surface that forms a first cavity. <i>See e.g., Chou at 3:66-4:2:</i> “The color temperature adjustable LED lamp 100 includes a 3-way lamp socket 110 and a 3-way lamp head 120. The 3-way lamp head 120 has two kinds of LED arrays with different color temperatures (not shown) therein.” <i>See e.g., Chou at Fig. 1:</i>  Fig. 1

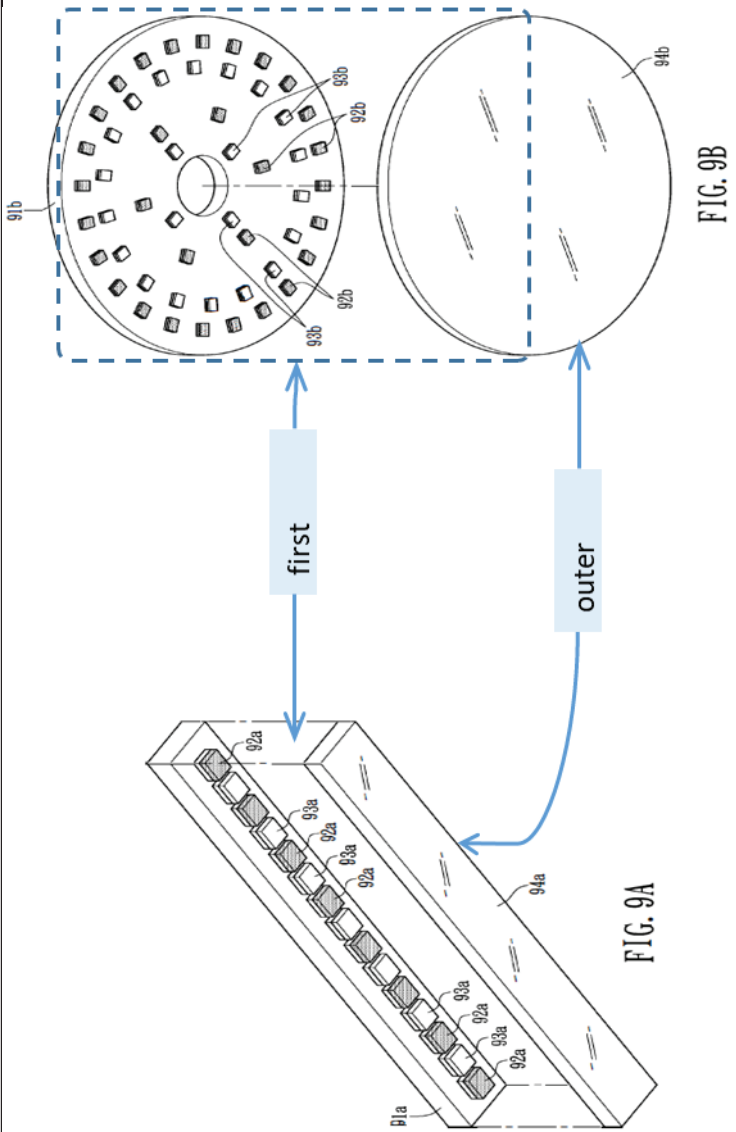
To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen.

For example, the LED light fixture of Chaimberg includes a "light housing 12" and the "LED's 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10." See, Chaimberg at 2:66-3:12.

Further, Figs. 1 and 2 depict the housing as shown below. See Chaimberg at Figs. 1 and 2.



'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Further, the housing 12 includes a circumferential flange 22, as shown above. Fig. 1, 2:32-34, 3:61-4:3. The housing 12 also includes a "wall" that extends vertically from the circumferential flange 22, towards ceiling sheeting 14. <i>Id.</i>, 3:3-5. As shown in Figure 1, outer surfaces of the wall and the circumferential flange 22 form a cavity that holds LEDs 11. <i>Id.</i> (LEDs 11 are mounted "inside a wall of the housing 12"). Thus, Chaimberg comprises housing comprising at least one outer surface that forms a first cavity as recited in element 1[a] of claim 1 of the '336 Patent. Chen further discloses: "Please refer to FIG. 9 A, a lighting apparatus having the microcontroller-based multifunctional electronic switch is provided. The lighting apparatus comprises a base 91a, a first lighting load 92a, a second lighting load 93a, a diffuser 94a and a microcontroller based electronic switch (not shown in the figure). The base 91a is for disposing the first lighting load 92a, the second lighting load 93a and the microcontroller based electronic switch which has been described in previous embodiments. The operation of the microcontroller based electronic switch related to lighting characteristic control of the first lighting load 92a and the second lighting load 93a can be refer red to previous embodiments, thus the redundant information is not repeated. For diffusing or spreading out or scattering the different color temperature light emitted by the first lighting load 91a and the second lighting load 92a, a diffuser 94a is provided to cover the first lighting load 92a and the second lighting load 93a. Further, the first lighting load 92a and the second lighting load 93a can be alternatively disposed on the base 91a. As shown in FIG. 9B, the first lighting load 92a comprises a plurality of lighting elements, and the second lighting load 93a comprises a plurality of lighting elements, wherein a lighting element of the second lighting load 93a is inserted between the two adjacent lighting elements of the first lighting load 92a for obtaining uniform color temperature of the diffused light, but present disclosure is not limited thereto." Chen at 20:24-50.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 9A FIG. 9B Chen at Figs. 9A, 9B. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. Chou discloses at least one electrical component disposed, at least in part, within the first cavity. See <i>e.g.</i>, Chou at 3:66-4:2: "The color temperature adjustable LED lamp 100 includes a 3-way lamp socket 110 and a 3-way lamp head 120. The 3-way lamp head 120 has two kinds of LED arrays with different color temperatures (not shown) therein." See <i>e.g.</i>, Chou at Fig. 2A:
1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"	

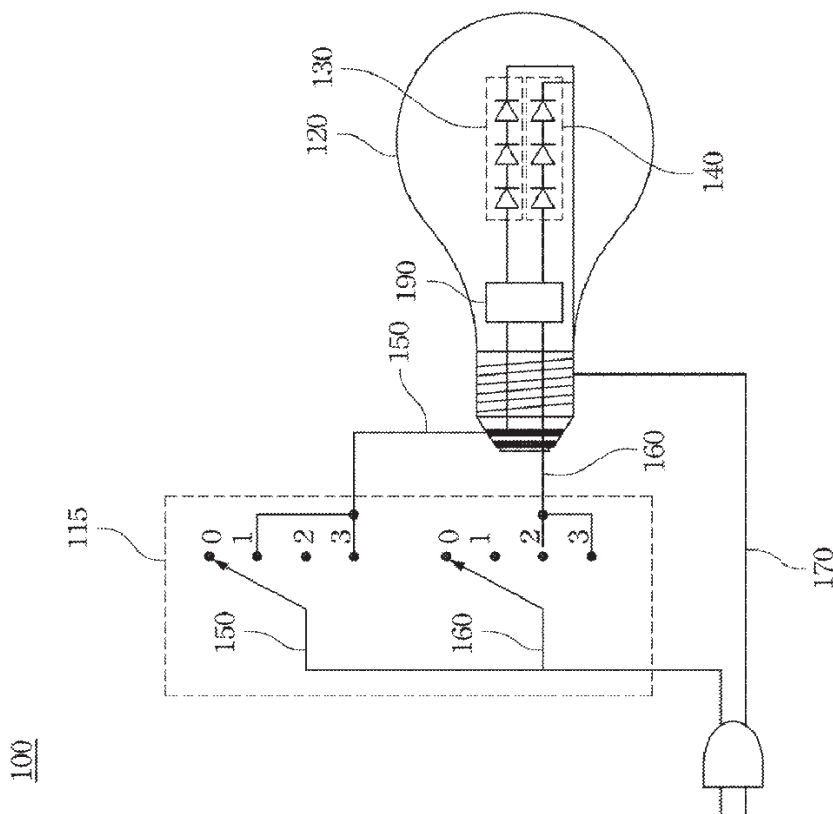
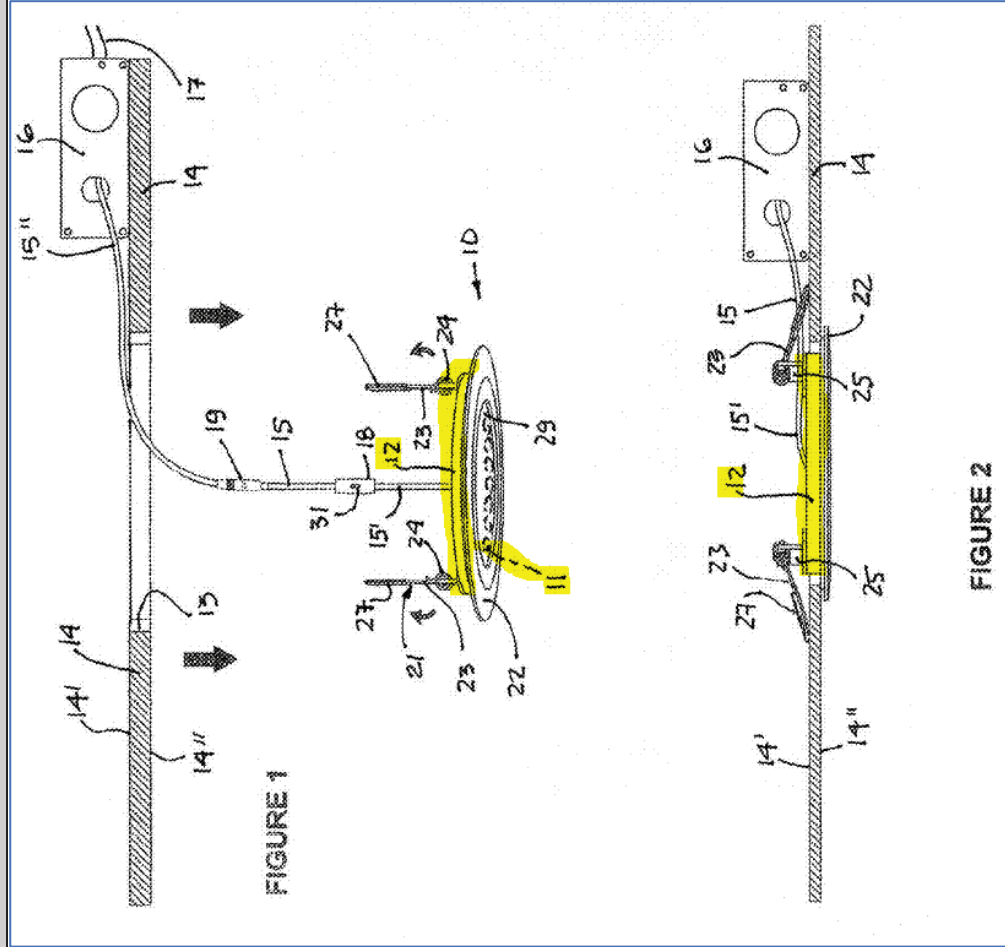


Fig. 2A

To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen.

For example, the LED light fixture includes a “light housing 12” and the “LED’s 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10.” *See*, Chaimberg at 2:66-3:12.

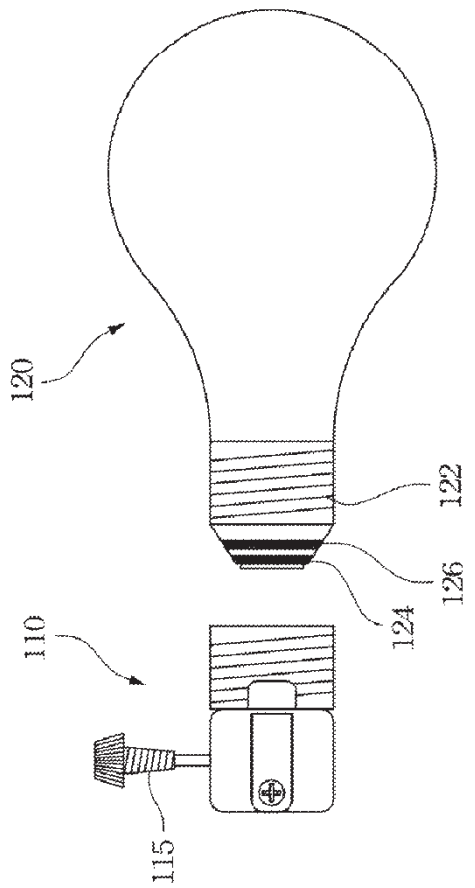


Thus, the LEDs mounted within the housing 12 of Chaimberg are "at least one electrical component disposed, at least in part, within the first cavity" of the housing as recited in element 1[b] of claim 1 of the '336 Patent.

Chen further discloses: "Please refer to FIG. 9 A, a lighting apparatus having the microcontroller-based multifunctional electronic switch is provided. The lighting apparatus comprises a base 91a, a first lighting load 92a, a second lighting load 93a, a diffuser 94a and a microcontroller based electronic switch (not shown in the figure). The base 91a is for disposing the first lighting load 92a, the second lighting load 93a

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	and the microcontroller based electronic switch which has been described in previous embodiments. The operation of the microcontroller based electronic switch related to lighting characteristic control of the first lighting load 92a and the second lighting load 93a can be refer red to previous embodiments, thus the redundant information is not repeated. For diffusing or spreading out or scattering the different color temperature light emitted by the first lighting load 91a and the second lighting load 92a, a diffuser 94a is provided to cover the first lighting load 92a and the second lighting load 93a. Further, the first lighting load 92a and the second lighting load 93a can be alternatively disposed on the base 91a. As shown in FIG. 9B, the first lighting load 92a comprises a plurality of lighting elements, and the second lighting load 93a comprises a plurality of lighting elements, wherein a lighting element of the second lighting load 93a is inserted between the two adjacent lighting elements of the first lighting load 92a for obtaining uniform color temperature of the diffused light, but present disclosure is not limited thereto." Chen at 20:24-50. FIG. 9A FIG. 9B Chen at Figs. 9A, 9B.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. Chou discloses an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component. <i>See e.g.</i>, Chou at 4:2-12: "The 3-way lamp Socket 110 is connected to a mains power Supply and the 3-way lamp head 120. A 3-way switch 115 is arranged on the 3-way lamp socket 110. The mains power supply includes a ground wire, a first live wire and a second live wire. The 3-way lamp head 120 has an exposed ground wire contact 122, a first live wire contact 124 and a second live wire contact 126. The 3-way lamp socket 110 also has contacts therein each connected to the exposed ground wire contact 122, the first live wire contact 124 and the second live wire contact 126." <i>See e.g.</i>, Chou at 5:19-28: "Moreover, the color temperature adjustable LED lamp 100 of the present invention further includes a control circuit 190. The control circuit 190 is connected to the first live wire 150, the second live wire 160, the first LED array 130 and the second LED array 140, to control operations of the first LED array 130 and the second LED array 140 according to the conducting states of the first live wire 150 and the second live wire 160, thereby avoiding over-brightness caused by simultaneous operations of the first LED array 130 and the second LED array 140." <i>See e.g.</i>, Chou at Fig. 1:

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	<u>100</u>  Fig. 1 <i>See e.g., Chou at Fig. 2A:</i>

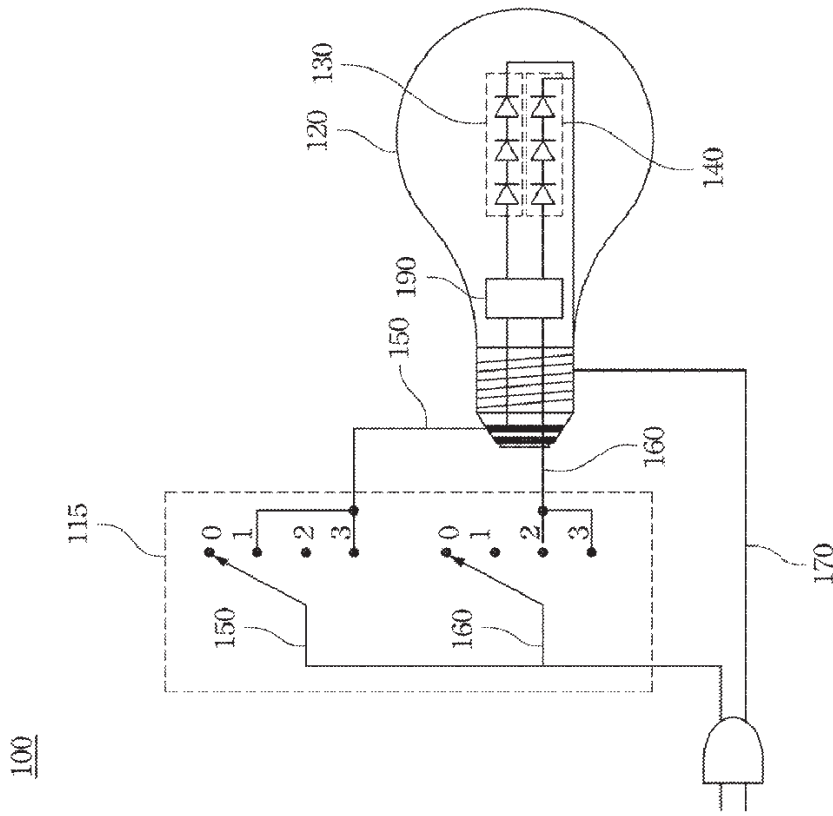


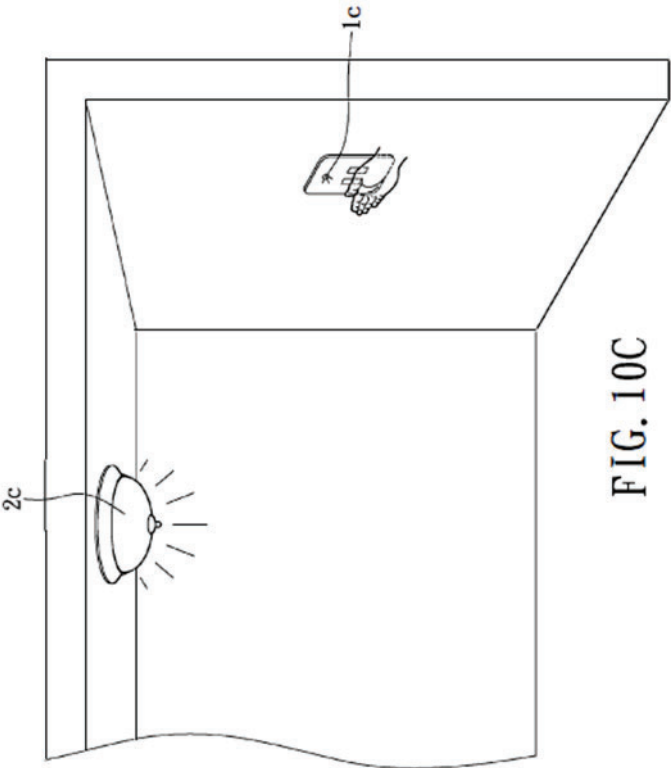
Fig. 2A

To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen.

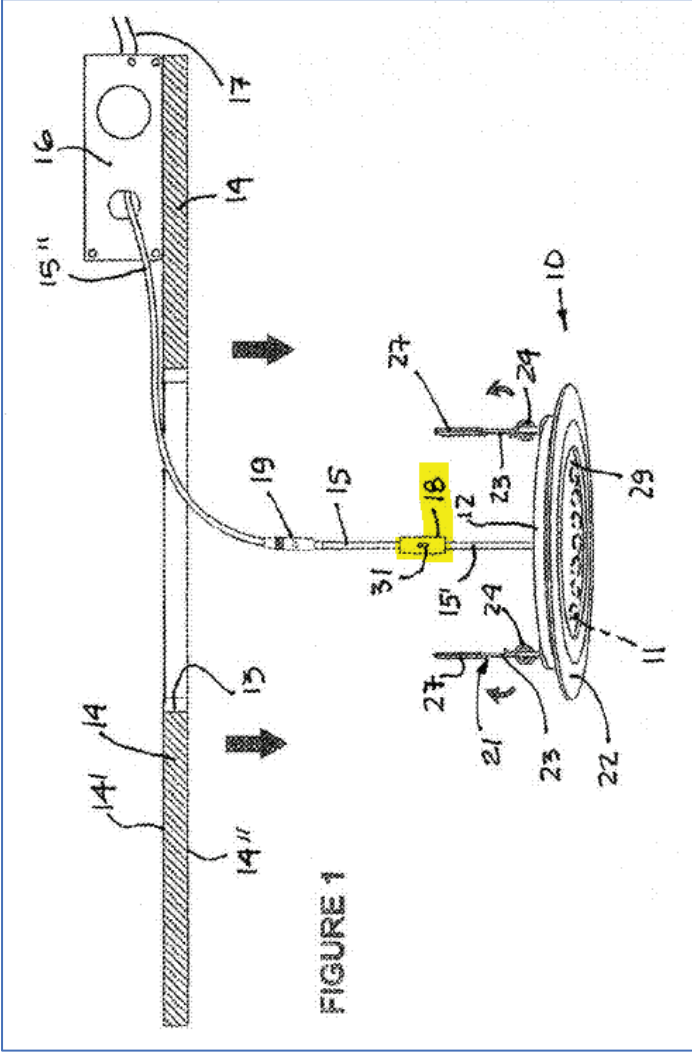
For example, the LED light fixture of Chaimberg includes "a cable 15 [that] is secured at one end 15', to the light housing 12 and has wires therein secured to the two sets of LED's to supply driving current to each of the sets and such is obvious to a person skilled in the art. The cable 15 is also secured at a far end 15' to a driver circuit 20 as illustrated in FIG. 3. The driver circuit 20 is mounted in a driver housing 16 to

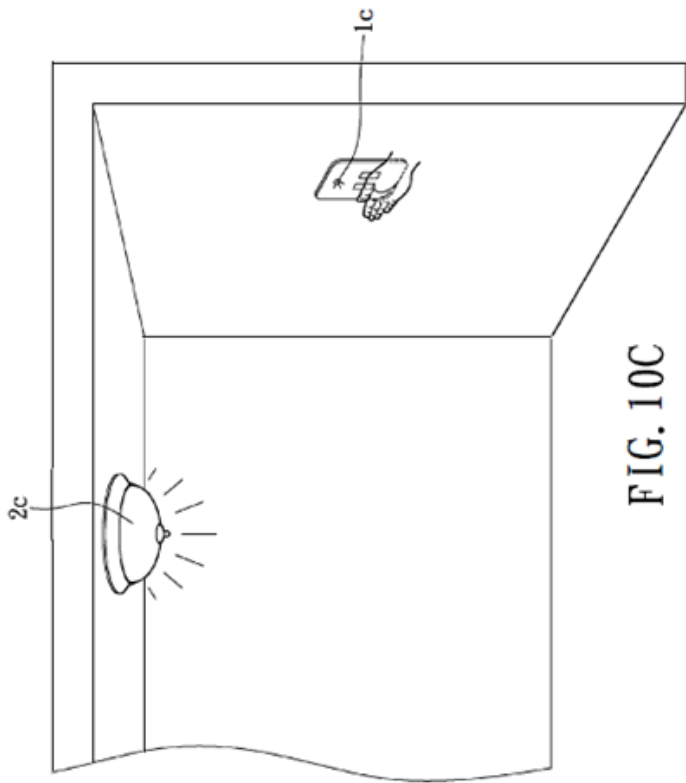
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	which is supplied line voltage from live wire 17." Chaimberg at 3:14-25; See also Chaimberg at 3:49-60, Figs. 1 and 2. FIGURE 1 FIGURE 2

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Thus, the cable 15 of the LED light fixture of Chaimberg is "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component" as recited in element 1[c] of claim 1 of the '336 Patent. Chen further discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1e by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 10C Chen at Fig. 10C. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
1[d]. "a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,"	Chou discloses a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing. <i>See e.g.</i>, Chou at 4:20-29: "FIG. 2A is a schematic switch circuit diagram of the 3-way switch under an initial operation mode. When the 3-way switch 115 in FIG. 1 is switched to the initial operation mode, the first live wire 150 and the second live wire 160 are both turned off. That is, no current enters the first LED array 130 and the second LED array 140 in the 3-way lamp head 120. At this time, the 3-way lamp head 120 does not emit light. In

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	other words, when the 3-way switch 115 is switched to the initial operation mode, the color temperature adjustable LED lamp 100 of the present invention is turned off.” <i>See e.g.</i>, Chou at 4:4-12: “A 3-way switch 115 is arranged on the 3-way lamp socket 110. The mains power supply includes a ground wire, a first live wire and a second live wire. The 3-way lamp head 120 has an exposed ground wire contact 122, a first live wire contact 124 and a second live wire contact 126. The 3-way lamp socket 110 also has contacts therein each connected to the exposed ground wire contact 122, the first live wire contact 124 and the second live wire contact 126.” <i>See e.g.</i>, Chou at Fig. 1: Fig. 1 To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	For example, the switch 18 is mounted on the electrical cable 15. See Chaimberg at 3:49-60 ("As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15' and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); <i>see also id.</i> at Fig. 1.  FIGURE 1 Thus, the switch 18 of Chaimberg is "a switch coupled to the electrical cable [15], wherein the switch is disposed remotely from the housing" as recited in element 1[d] of claim 1 of the '336 Patent. Chen further discloses: "The detection device is for detecting an external motion signal played by a user and converting said external motion signal into a message carrying sensing signal." Chen at 2:28-31. "In one exemplary embodiment, the detection device is an infrared ray sensor comprising a means for emitting

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	infrared light to form a defined infrared ray detecting zone and a means for detecting infrared light reflected from an object moving into said infrared ray detecting zone.” Chen at 2:50-2:54. Chen then discloses: “FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user 's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will ctivate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space.” Chen at 22:61-23:15.  FIG. 10C is a perspective view of a room. On the ceiling, there is a light fixture labeled 2c. On the wall, there is a wall switch labeled 1c. A hand is shown interacting with the wall switch 1c. The room is depicted with simple lines representing the walls, ceiling, and floor.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Chen at Fig. 10C. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Chou discloses wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire. <i>See e.g.</i>, Chou at 2:62-63: "The color temperature adjustable LED lamp uses two kinds of LEDs with different color temperatures as light sources." <i>See e.g.</i>, Chou at 3:1-3: "Furthermore, the color temperature adjustable LED lamp uses the 3-way switch to control the actuation modes of the first LED array and the second LED array." <i>See e.g.</i>, Chou at 3:64-4:9: "FIG. 1 is an exploded appearance view of the color temperature adjustable LED lamp of the present invention in an embodiment. The color temperature adjustable LED lamp 100 includes a 3-way lamp socket 110 and a 3-way lamp head 120. The 3-way lamp head 120 has two kinds of LED arrays with different color temperatures (not shown) therein. The 3-way lamp Socket 110 is connected to a mains power supply and the 3-way lamp head 120. A 3-way switch 115 is arranged on the 3-way lamp socket 110. The mains power supply includes a ground wire, a first live wire and a second live wire. The 3-way lamp head 120 has an exposed ground wire contact 122, a first live wire contact 124 and a second live wire contact 126." <i>See e.g.</i>, Chou at 4:13-19: "The 3-way switch 115 has four operation modes, so as to change the conducted wiring line by operating the 3-way switch 115 and further turn on the corresponding LED array. Referring to FIGS. 2A-2D, they

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	illustrate different operation modes of the 3-way switch 115 and the light-emitting states of the 3-way lamp head 120 corresponding to the different operation modes." <i>See e.g.</i>, Chou at 4:20-5:9: "FIG. 2A is a schematic switch circuit diagram of the 3-way switch under an initial operation mode. When the 3-way switch 115 in FIG. 1 is switched to the initial operation mode, the first live wire 150 and the second live wire 160 are both turned off. That is, no current enters the first LED array 130 and the second LED array 140 in the 3-way lamp head 120. At this time, the 3-way lamp head 120 does not emit light. In other words, when the 3-way switch 115 is switched to the initial operation mode, the color temperature adjustable LED lamp 100 of the present invention is turned off. FIG. 2B is a schematic switch circuit diagram of the 3-way switch under the first operation mode. When the 3-way switch 115 in FIG. 1 is switched to the first operation mode, only the first live wire 150 is conducted and the second live wire 160 is turned off. That is, the current flows from the first live wire 150 to the first LED array 130 and the ground wire 170 to form a loop, making the first LED array 130 emit light, and no current flows through the second live wire 160, so that the second LED array 140 does not emit light. In other words, when the 3-way switch 115 is switched to the first operation mode, the color temperature of the light emitted by the color temperature adjustable LED lamp 100 is the first color temperature of the first LED array 130. FIG. 2C is a schematic switch circuit diagram of the 3-way switch under a second operation mode. When the 3-way switch 115 in FIG. 1 is switched to the second operation mode, only the second live wire 160 is conducted and the first live wire 150 is turned off. That is, the current flows from the second live wire 160 to the second LED array 140 and the ground wire 170 to form a loop, making the second LED array 140 emit light, and no current flows through the first live wire 150, so that the first LED array 130 does not emit light. In other words, when the 3-way switch 115 is switched to the second operation mode, the color temperature of the light emitted by the color temperature adjustable LED lamp 100 is the second color temperature of the second LED array 140. The second color temperature is different from the first color temperature. For example, the first color temperature may be a white light while the second color temperature is a yellow light. FIG. 2D is a schematic switch circuit diagram of the 3-way switch under a third operation mode. When the 3-way switch 115 in FIG. 1 is switched to the third operation mode, the first live wire 150 and the second live wire 160 are both conducted. The current flows from the first live wire 150 to the first LED array 130 and the ground wire 170 to form a loop, making the first LED array 130 emit light. At the same time, the current flows from the second live wire 160 to the second LED array 140 and the ground wire 170 to form a loop, making the second LED array 140 emit light. In other words, when the 3-way switch 115 is switched to the third operation mode, the third color temperature of the light emitted by the color tem

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	perature adjustable LED lamp 100 is equivalent to the color temperature of the light mixed from the light emitted by the first LED array 130 and the light emitted by the second LED array 140. That is, the third color temperature is between the first color temperature and the second color temperature.” See e.g., Chou at Fig 2A: Fig. 2A See e.g., Chou at Fig. 2B:

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Fig. 2B See e.g., Chou at Fig. 2C:

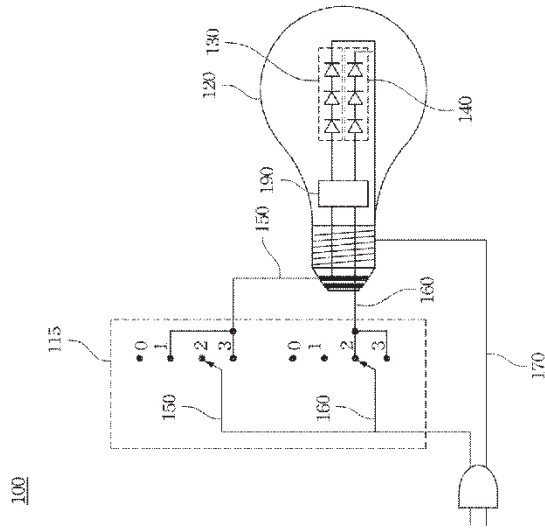


Fig. 2C

See e.g., Chou at Fig. 2D:

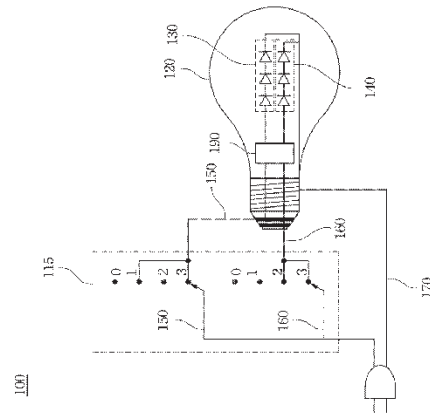
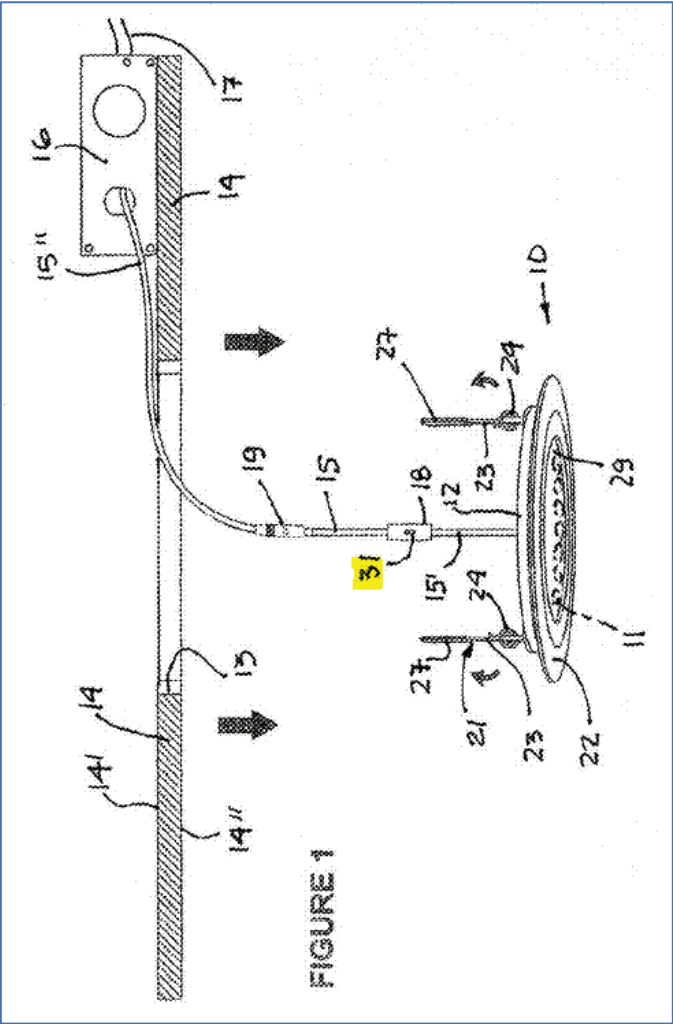


Fig. 2D

See e.g., Chou at 8:52-9:8:

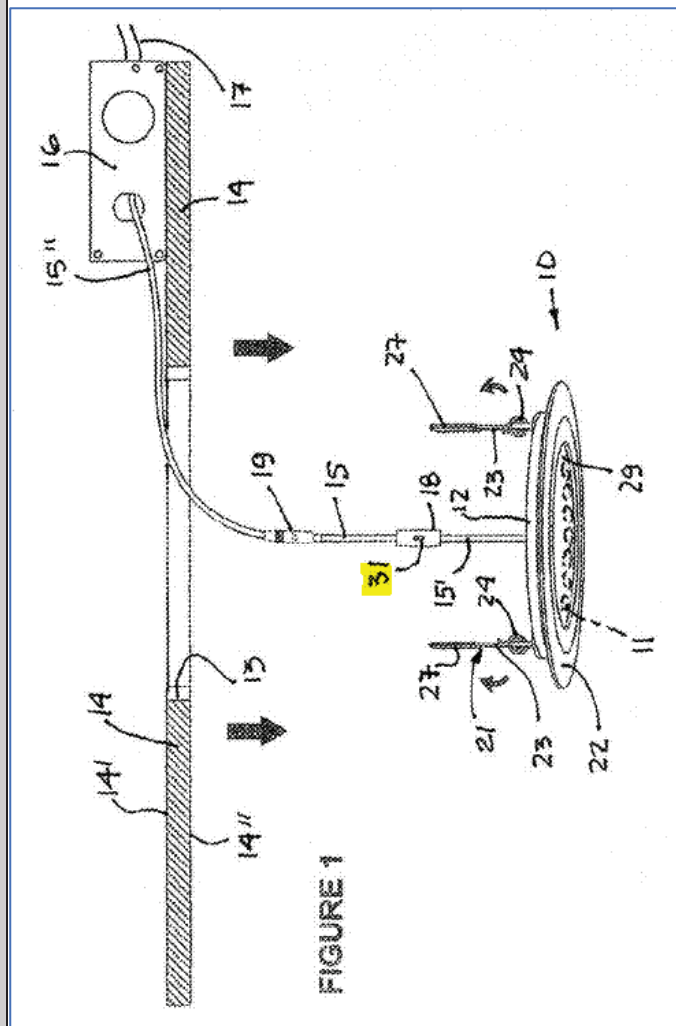
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	"A color temperature adjustable LED lamp, comprising: a 3-way switch for selectively conducting a first live wire, a second live wire or the first and the second live wires; a mains detecting circuit connected to the 3-way Switch for detecting a conducting state of the first live wire and the second live wire, wherein when the first live wire is conducted, a first partial Voltage signal is generated, and when the second live wire is conducted, a second partial Voltage signal is generated; an AND logic circuit connected to the mains detecting circuit, wherein when receiving the first partial Voltage signal and the second partial Voltage signal at the same time, the AND logic circuit generates a working signal; an oscillation circuit connected to the AND logic circuit and generating an oscillation a first LED array to emit a light with a first color temperature, wherein the first LED array is actuated while receiving the first partial Voltage signal or the oscillation signal; and a second LED array to emit a light with a second color temperature, wherein the second LED array is actuated while receiving the second partial Voltage signal or the oscillation signal." <i>See e.g.</i>, Chou at 9:14-20: "The color temperature adjustable LED lamp of claim 1, wherein the first LED array comprises a first switch and a plurality of first LEDs connected with each other, and the second LED array comprises a second Switch and a plurality of second LEDs connected with each other, wherein the first color temperature of the first LEDs is different from the second color temperature of the second LEDs." To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen. For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-49. <i>See also</i> Chaimberg at 4:37-5:10 ("At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30....

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	When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads of the 5000 K LED's. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30'. ... When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).")  FIGURE 1

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	Thus, the switch 18 of Chaimberg is a switch with "a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire" as recited in claim 1 of the '336 Patent. Chen further discloses: "FIG. 1 is a block diagram of a microcontroller based electronic switch using an infrared ray sensor as a detection device applied for two AC lighting loads with different color temperatures powered by an AC power source according to an exemplary embodiment of the present disclosure." Chen at 4:43-47. Chen then discloses: "With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions...." Chen at 4:30-59. "When the slide button 31 is positioned to the middle, at a third position of the switch, ... When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT)." Chen at 4:60-5:10.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	The diagram shows a system enclosed in a dashed box labeled '1'. Inside, an infrared ray sensor (11) and a zero-crossing-point detector (13) are connected to a central microcontroller (12). The microcontroller (12) sends control signals, labeled tD_a and tD_b, to two bidirectional controllable semiconductor switching elements, 14a and 14b. Each switching element is connected to a corresponding load, 2a and 2b. Both loads are connected to an AC power source (3) located outside the dashed box. FIG. 1 Chen at Fig. 1. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. Chou discloses wherein each position of the plurality of positions is discrete. <i>See e.g., Chou at 4:13-19:</i> "The 3-way switch 115 has four operation modes, so as to change the conducted wiring line by operating the 3-way switch 115 and further turn on the corresponding LED array. Referring to FIGS. 2A-2D, they illustrate different operation modes of the 3-way switch 115 and the light-emitting states of the 3-way lamp head 120 corresponding to the different operation modes." <i>See e.g., Chou at Fig. 2A:</i>

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Fig. 2A To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen. For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions are distinct and correspond to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-48.



Claim Chart Against the '336 Patent re U.S. Patent No. 8,890,436

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).") Thus, "each position of the plurality of positions [of the switch 18 of Chaimberg] is discrete" as recited in claim 3 of the '336 Patent. Chen further discloses: "The direct touch interface on the other hand uses a wired method to receive the external control signal set by an user, wherein the external control signal can be generated from a push button, a touch pad, a voltage divider, or a power interruption switch or button operated by the user, or a conduction rate of a phase controller set by the user, wherein, if the external control signal is an analogue signal, a conversion circuitry may be included in the detection device or as a virtual circuitry programmable embedded in the microcontroller to convert the analogue signal into the message carrying sensing signal readable and interpretable to the microcontroller." Chen at 25:36-48. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Chou discloses wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position. To the extent that Chou does not explicitly disclose a fifth position, it would have been obvious for one of ordinary skill in the art to have a fifth position, for example by modifying this reference to include these portions in view of the secondary references below, including of Ducharme, Roberge, Chaimberg, and/or Chen. <i>See e.g.</i>, Chou at 4:13-19: "The 3-way switch 115 has four operation modes, so as to change the conducted wiring line by operating the 3-way switch 115 and further turn on the corresponding LED array. Referring to FIGS. 2A-2D, they illustrate different operation modes of the 3-way switch 115 and the light-emitting states of the 3-way lamp head 120 corresponding to the different operation modes." <i>See e.g.</i>, Ducharme at 16:64-17:17:

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	“One such manual control system (2036) is in detail in FIG. 10b. The depicted control unit features a dial marked to indicate a range of color temperatures, e.g., from 3000K to 10,500K. This device would be useful on a lighting fixture used to produce a range of temperatures ("colors") of white light. Such as the one discussed below. It would be under stood by one of skill in the art that broader, narrower, or overlapping ranges may be employed, and a similar System could be employed to control lighting fixtures that can produce light of a spectrum beyond white, or not including white. A manual control system (2036) may be included as part of a processor controlling an array of lighting units, coupled to a processor, e.g., as a peripheral component of a lighting control System, disposed on a remote control capable of transmitting a signal, Such as an infrared or microwave signal, to a System controlling a lighting unit, or employed or configured in any other manner, as will readily be understood by one of skill in the art. Additionally, instead of a dial, a manual control System (2036) may employ a Slider, a mouse, or any other control or input device Suitable for use in the Systems and methods described herein.” <i>See e.g., Ducharme at Fig. 10b:</i> The diagram shows a rectangular box labeled 2036. Inside the box is a circular dial. A pointer is positioned on the dial, pointing towards the 4500K mark. The dial has seven radial markings with labels: 3000K, 4500K, 6000K, 7500K, 9000K, and 10,500K. The 9000K and 10,500K labels are positioned on the right side of the dial, while the others are on the left and top. Fig. 10b <i>See e.g., Roberge at 42:51-65:</i> “Referring to FIG. 34i, in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of

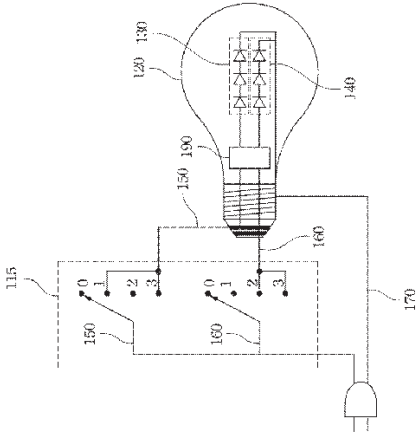
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K	white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial. A slide mechanism can be used like the dial to set a particular color temperature of white light, or to select a particular color of non-white light, in either case on a scale. Again, the designer can specify a particular setting, and the installer can set it according to the design plan. Providing adjustable lighting units 102 offers designers and installers much greater control over the correct maintenance of the lighting of the environment." <i>See e.g., Roberge at Fig. 34i:</i> For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture. It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. Chou discloses switch positions corresponding to different color temperatures. <i>See e.g., Chou at 4:13-19:</i> "The 3-way switch 115 has four operation modes, so as to change the conducted wiring line by operating the 3-way switch 115 and further turn on the corresponding LED array. Referring to FIGS. 2A-2D, they illustrate different operation modes of the 3-way switch 115 and the light-emitting states of the 3-way lamp head 120 corresponding to the different operation modes."

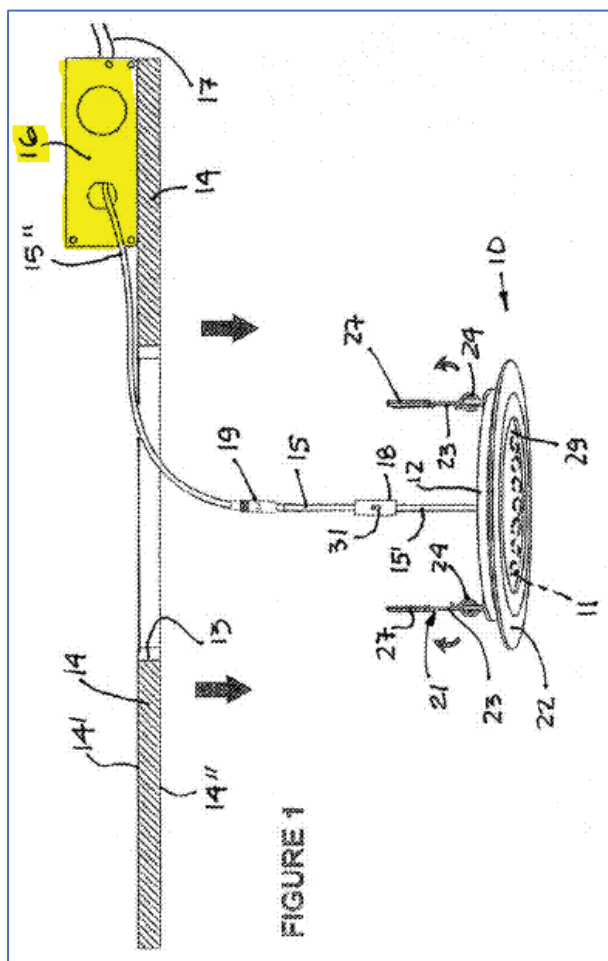
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	<i>See e.g., Chou at 4:20-5:9:</i> "FIG. 2A is a schematic switch circuit diagram of the 3-way switch under an initial operation mode. When the 3-way switch 115 in FIG. 1 is switched to the initial operation mode, the first live wire 150 and the second live wire 160 are both turned off. That is, no current enters the first LED array 130 and the second LED array 140 in the 3-way lamp head 120. At this time, the 3-way lamp head 120 does not emit light. In other words, when the 3-way switch 115 is switched to the initial operation mode, the color temperature adjustable LED lamp 100 of the present invention is turned off. FIG. 2B is a schematic switch circuit diagram of the 3-way switch under the first operation mode. When the 3-way switch 115 in FIG. 1 is switched to the first operation mode, only the first live wire 150 is conducted and the second live wire 160 is turned off. That is, the current flows from the first live wire 150 to the first LED array 130 and the ground wire 170 to form a loop, making the first LED array 130 emit light, and no current flows through the second live wire 160, so that the second LED array 140 does not emit light. In other words, when the 3-way switch 115 is switched to the first operation mode, the color temperature of the light emitted by the color temperature adjustable LED lamp 100 is the first color temperature of the first LED array 130. FIG. 2C is a schematic switch circuit diagram of the 3-way switch under a second operation mode. When the 3-way switch 115 in FIG. 1 is switched to the second operation mode, only the second live wire 160 is conducted and the first live wire 150 is turned off. That is, the current flows from the second live wire 160 to the second LED array 140 and the ground wire 170 to form a loop, making the second LED array 140 emit light, and no current flows through the first live wire 150, so that the first LED array 130 does not emit light. In other words, when the 3-way switch 115 is switched to the second operation mode, the color temperature of the light emitted by the color temperature adjustable LED lamp 100 is the second color temperature of the second LED array 140. The second color temperature is different from the first color temperature. For example, the first color temperature may be a white light while the second color temperature is a yellow light. FIG. 2D is a schematic switch circuit diagram of the 3-way switch under a third operation mode. When the 3-way switch 115 in FIG. 1 is switched to the third operation mode, the first live wire 150 and the second live wire 160 are both conducted. The current flows from the first live wire 150 to the first LED array 130 and the ground wire 170 to form a loop, making the first LED array 130 emit light. At the same time, the current flows from the second live wire 160 to the second LED array 140 and the ground wire 170 to form a loop, making the second LED array 140 emit light. In other words, when the 3-way switch 115 is switched to the third operation mode, the third color temperature of the light emitted by the color temperature adjustable LED lamp 100 is equivalent to the color temperature of the light mixed from the light emitted by the first LED array 130 and the light emitted by the second LED array 140. That is, the third color temperature is between the first color temperature and the second color temperature."

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	To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including of Ducharme, Roberge, and Chaimberg. See <i>e.g.</i>, Roberge at 42:51-65: "Referring to FIG. 34i, in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial. A slide mechanism can be used like the dial to set a particular color temperature of white light, or to select a particular color of non-white light, in either case on a scale. Again, the designer can specify a particular setting, and the installer can set it according to the design plan. Providing adjustable lighting units 102 offers designers and installers much greater control over the correct maintenance of the lighting of the environment." See <i>e.g.</i>, Roberge at Fig. 34i: See <i>e.g.</i>, Ducharme at 16:64-17:17: "One such manual control system (2036) is in detail in FIG. 10b. The depicted control unit features a dial marked to indicate a range of color temperatures, <i>e.g.</i>, from 3000K to 10,500K. This device would be useful on a lighting fixture used to produce a range of temperatures ("colors") of white light, Such as the one discussed below. It would be under stood by one of skill in the art that broader, narrower, or overlapping ranges may be employed, and a similar System could be employed to control lighting fixtures that can produce light of a spectrum beyond white, or not including white. A manual control system (2036)

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	may be included as part of a processor controlling an array of lighting units, coupled to a processor, e.g., as a peripheral component of a lighting control System, disposed on a remote control capable of transmitting a signal, Such as an infrared or microwave signal, to a System controlling a lighting unit, or employed or configured in any other manner, as will readily be understood by one of skill in the art. Additionally, instead of a dial, a manual control System (2036) may employ a Slider, a mouse, or any other control or input device Suitable for use in the Systems and methods described herein. See e.g., Ducharme at Fig. 10b: The diagram shows a rectangular box labeled 2036 containing a circular dial. A line from the label 2036 points to the dial. The dial has seven radial lines pointing to different positions, each labeled with a color temperature value: 3000K, 4500K, 6000K, 7500K, 9000K, 10,500K, and 3500K. A small line segment is drawn on the dial, pointing towards the 4500K position. Fig. 10b It would have been obvious one of ordinary skill in the art to include 5 switch positions corresponding to the abovementioned values in view of Roberge, Ducharme, and/or Chaimberg. For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture (3000 K, 4000K, and 5000K). It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs of 3500K and 2700K.

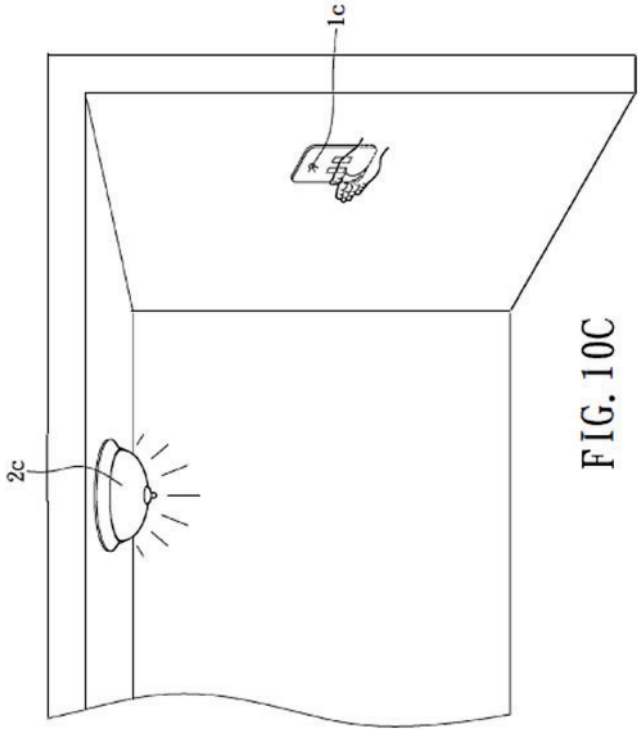
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. Chou discloses a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch. See <i>e.g.</i>, Chou at Fig. 1: The diagram illustrates a luminaire assembly. A junction box 100 is shown with a switch 110 inside. A cable 115 is connected to the switch. The junction box is mounted on a base 124, which is part of a larger structure 122. A light bulb 120 is shown above the junction box. Fig. 1 See <i>e.g.</i>, Chou at Fig. 2A:

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	<u>100</u>  Fig. 2A See <i>e.g.</i>, Chou at 4:4-12: “A 3-way switch 115 is arranged on the 3-way lamp socket 110. The mains power supply includes a ground wire, a first live wire and a second live wire. The 3-way lamp head 120 has an exposed ground wire contact 122, a first live wire contact 124 and a second live wire contact 126. The 3-way lamp socket 110 also has contacts therein each connected to the exposed ground wire contact 122, the first live wire contact 124 and the second live wire contact 126.” To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen. For example, Chaimberg includes a driver housing 16 (<i>i.e.</i> a junction box) with an internal cavity, “the driver circuit 20 is mounted in the driver housing 16.” Chaimberg at 3:23-24, 4:30-37. The driver circuit 20 controls the temperature output based on the setting of the switch 18. See Chaimberg at 4:30-37 (“With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30’ for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions.”); see <i>also id.</i> at Fig. 1.

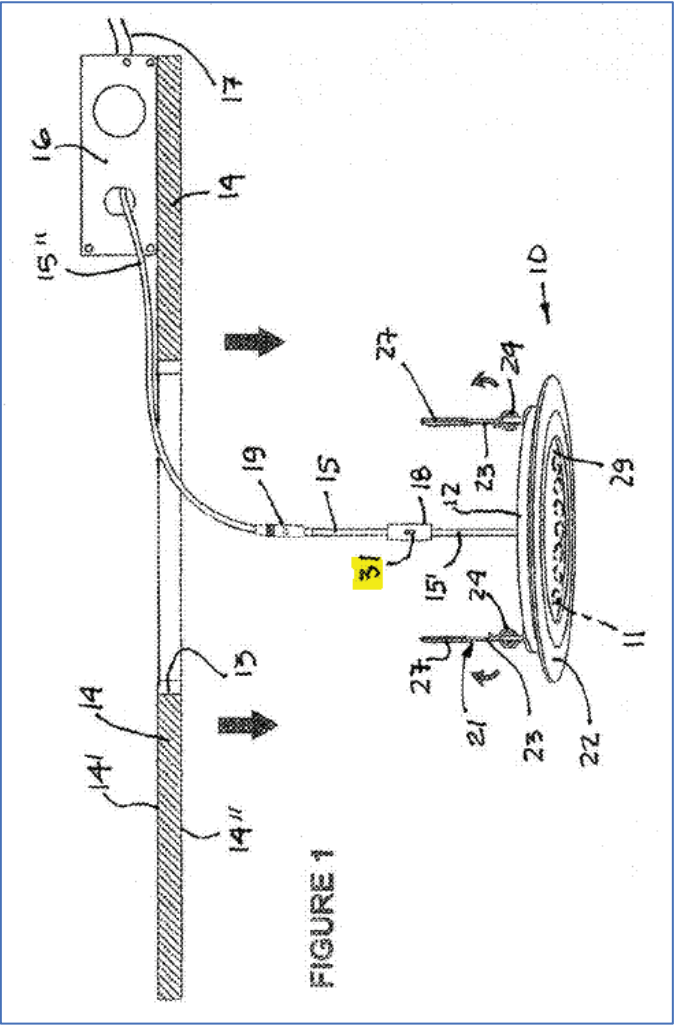


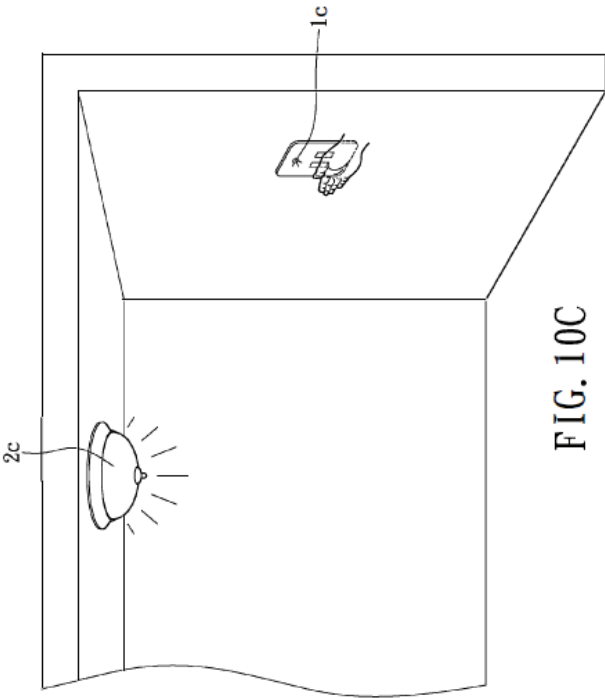
While Chaimberg discloses that locating the CCT switch 18 on the electrical cable 15, away from the junction box (*i.e.* driver housing 16). A POSA would understand that Chaimberg discloses that the CCT switch 18 could be located on/in the driver housing 16.

Chen further discloses: “The direct touch interface on the other hand uses a wired method to receive the external control signal set by an user, wherein the external control signal can be generated from a push button, a touch pad, a voltage divider, or a power interruption switch or button operated by the user, or a conduction rate of a phase controller set by the user, wherein, if the external control signal is an analogue signal, a conversion circuitry may be included in the detection device or as a virtual circuitry programmable embedded in the microcontroller to convert the analogue signal into the message carrying sensing signal readable and interpretable to the microcontroller.” Chen at 25:36-48.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
9. "The luminaire of claim 1, wherein the switch is a slide switch."	 FIG. 10C Chen at Fig. 10C. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious. To the extent that Chou does not explicitly disclose a slide switch, it would have been obvious to one of ordinary skill in the art to use a slide switch, for example by modifying this reference to include these portions in view of the secondary references below, including Ducharme, Roberge, Chaimberg, and/or Chen. <i>See e.g., Ducharme at 16:45-55:</i> "In another embodiment, a manual control system (2036) is used in the system (2000), as depicted in FIG. 10a, such as a dial, Slider, Switch, multipole Switch, console, other lighting control unit, or any other controller or combination of controllers to permit a user to modify the illumination conditions until the illumination conditions or the appearance of a Subject being illuminated is desirable. For example, a dial

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	or slider may be used in a System to modulate the net color spectrum produced, the illumination along the color temperature curve, or any other modulation of the color of the lighting fixture.” <i>See e.g.</i>, Ducharme at 16:64-17:17: “One such manual control system (2036) is in detail in FIG. 10b. The depicted control unit features a dial marked to indicate a range of color temperatures, e.g., from 3000K to 10,500K. This device would be useful on a lighting fixture used to produce a range of temperatures ("colors") of white light. Such as the one discussed below. It would be under stood by one of skill in the art that broader, narrower, or overlapping ranges may be employed, and a similar System could be employed to control lighting fixtures that can produce light of a spectrum beyond white, or not including white. A manual control system (2036) may be included as part of a processor controlling an array of lighting units, coupled to a processor, e.g., as a peripheral component of a lighting control System, disposed on a remote control capable of transmitting a signal, Such as an infrared or microwave signal, to a System controlling a lighting unit, or employed or configured in any other manner, as will readily be understood by one of skill in the art. Additionally, instead of a dial, a manual control System (2036) may employ a Slider, a mouse, or any other control or input device Suitable for use in the Systems and methods described herein.” <i>See e.g.</i>, Roberge at 42:13-17: “FIG. 34b and FIG. 34c show user interfaces 4908 involving slides 3404 that can change the intensity or color, depending on the mode. A dual slide is shown in FIG. 34c, where one slide 3404 can adjust color and the other can adjust intensity, or the like.” <i>See e.g.</i>, Roberge at Figs. 34b and 34c: Fig. 34b Fig. 34c

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Chaimberg further discloses, "[t]he switch 18 is a toggle switch provided with a slide button 31." Chaimberg at 4:34-37; <i>see also id.</i> at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.").  Thus, Chaimberg discloses a LED light fixture wherein the CCT switch is a slide switch as recited in claim 9 of the '336 Patent. Chen further discloses: "The detection device is for detecting an external motion signal played by a user and converting said external motion signal into a message carrying sensing signal." Chen at 2:28-31. "In one exemplary embodiment, the detection device is an infrared ray sensor comprising a means for emitting infrared light to form a defined infrared ray detecting zone and a means for detecting infrared light reflected from an object moving into said infrared ray detecting zone." Chen at 2:50-54.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	Chen then discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user 's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will ctivate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.  Chen at Fig. 10C. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	To the extent that Chou does not explicitly disclose this element, it would have been obvious to one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Halliwell, Van Winkle, and/or Chaimberg. <i>See e.g., Halliwell at 6:63-7:08:</i> "For example, the switch 30 may be mounted on an exterior surface of the LED lighting device 20. For example, the switch 30 may be mounted on a back, bottom, or otherwise generally hidden surface of the device housing 24 such that the switch is not generally viewable by a user when the LED lighting device 20 is in operation. In some embodiments, the switch 30 may be accessible to the user when the LED lighting device is installed. In such embodiments, the switch 30 may still be generally hidden and/or not located where the switch 30 is easily viewable (e.g., the switch 30 is generally not located on the front of the LED lighting device 20)." <i>See e.g., Halliwell at Fig. 2:</i> FIG. 2 <i>See e.g., Halliwell at Figs. 2A-D:</i>

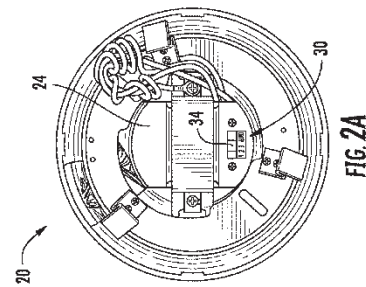


FIG. 2A

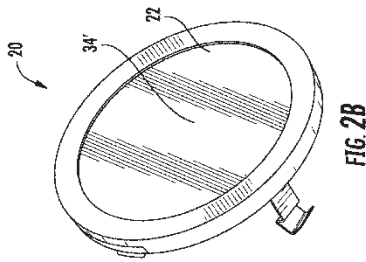


FIG. 2B

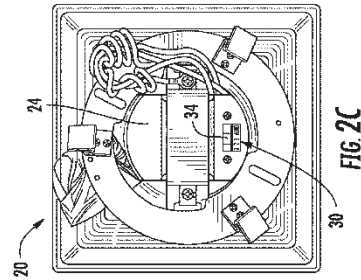


FIG. 2C

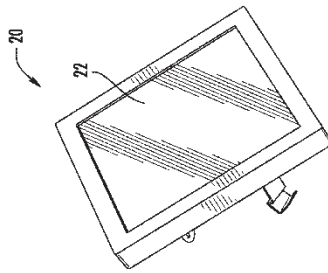
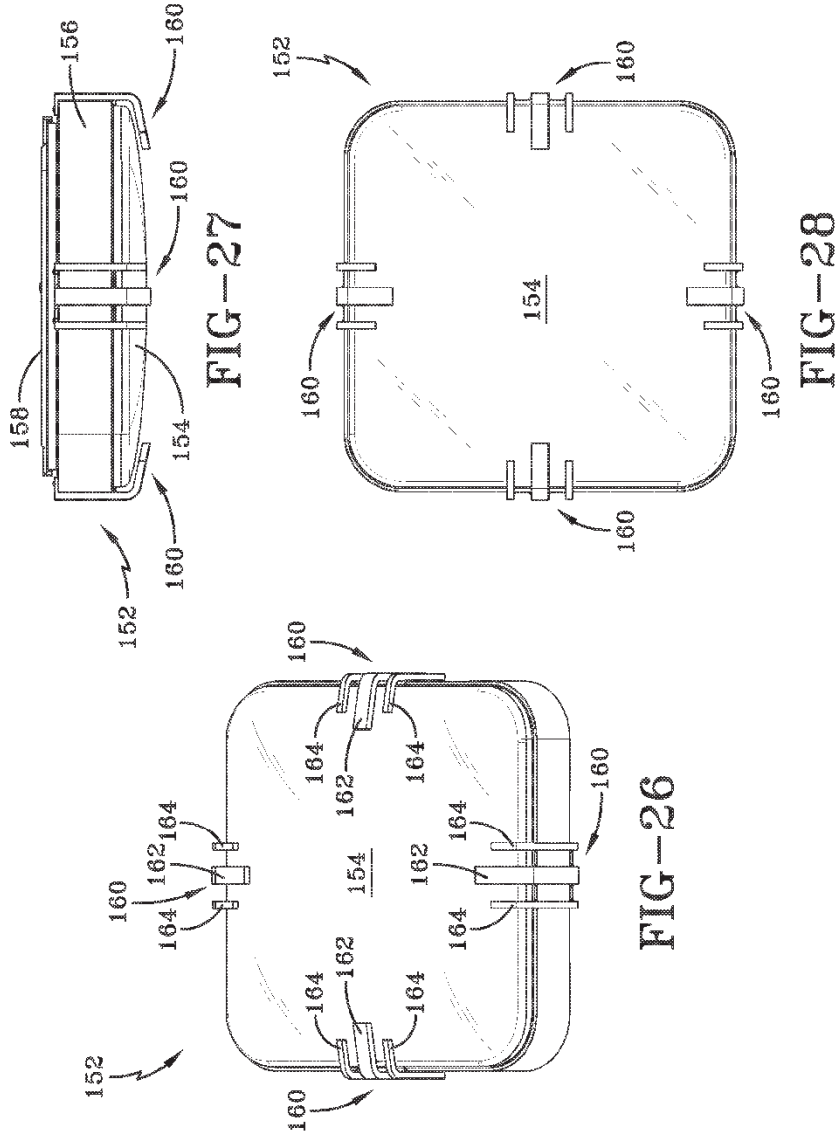
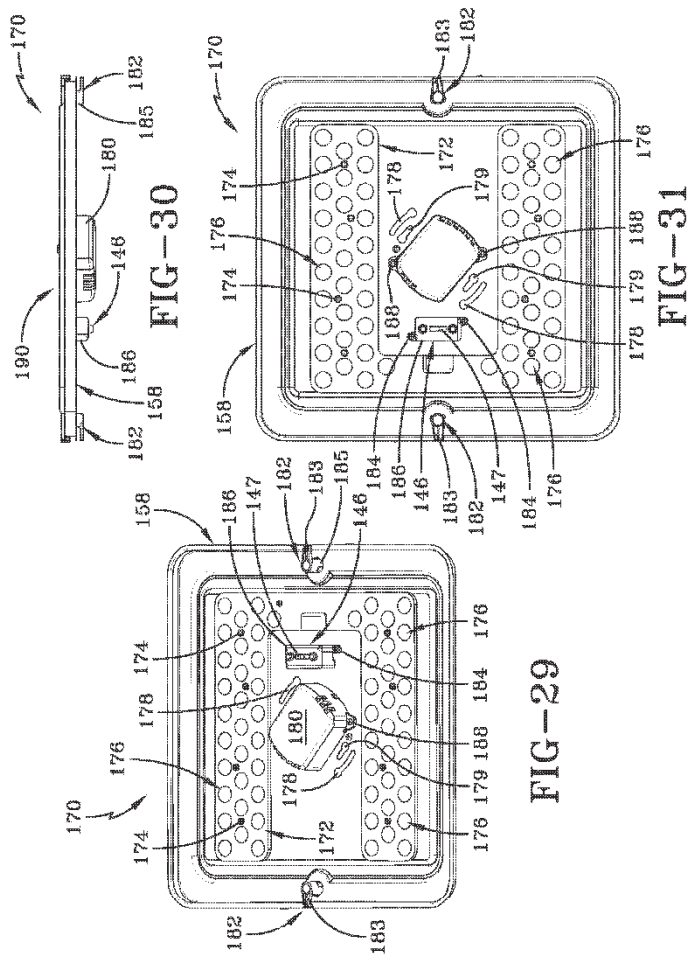


FIG. 2D

See e.g., Van Winkle at 10:40-54:

"Diffuser 154 is a concealment to render slide switch assembly 146 unobservable and inaccessible when it is connected to base 158, and renders slide switch assembly 146 observable and accessible once it is removed from base 158. Slide switch assembly 146 is attached to base 158 by means of a pair of screws 184 which extend through tabs extending from a housing 186 of switch assembly 145 as shown in FIGS. 29 and 31. Housing 180 also has a pair of tabs for which another set of screws 188 is used to attach housing 180 to base 158. Although not shown, a set of electrical leads are disposed on a side 190 opposite to the side of base 158 shown in FIGS. 29 and 31. These leads would be operatively connected to the appropriate circuitry in the ceiling to which fixture 152 is to be electrically connected."

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	See e.g., Van Winkle at Figs. 26-28:  FIG-26 is a perspective view of a rectangular device 152 with four straps 160, each having a buckle 162 and a strap end 164. The device has a central opening 154. FIG-27 is a perspective view of the device 152 with a strap 156 and a buckle 158. FIG-28 is a perspective view of the device 152 with four straps 160, each having a buckle 160. The device has a central opening 154. See e.g., Van Winkle at Figs. 29-31:



With respect to Chaimberg, for example, the switch 18 is inaccessible when housing is installed. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); *see also id.* at Fig. 2.

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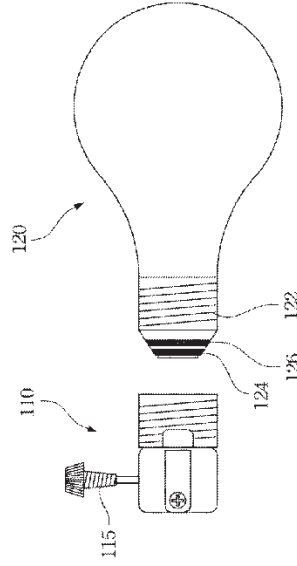


Fig. 1

See e.g., Chou at 4:1-5:

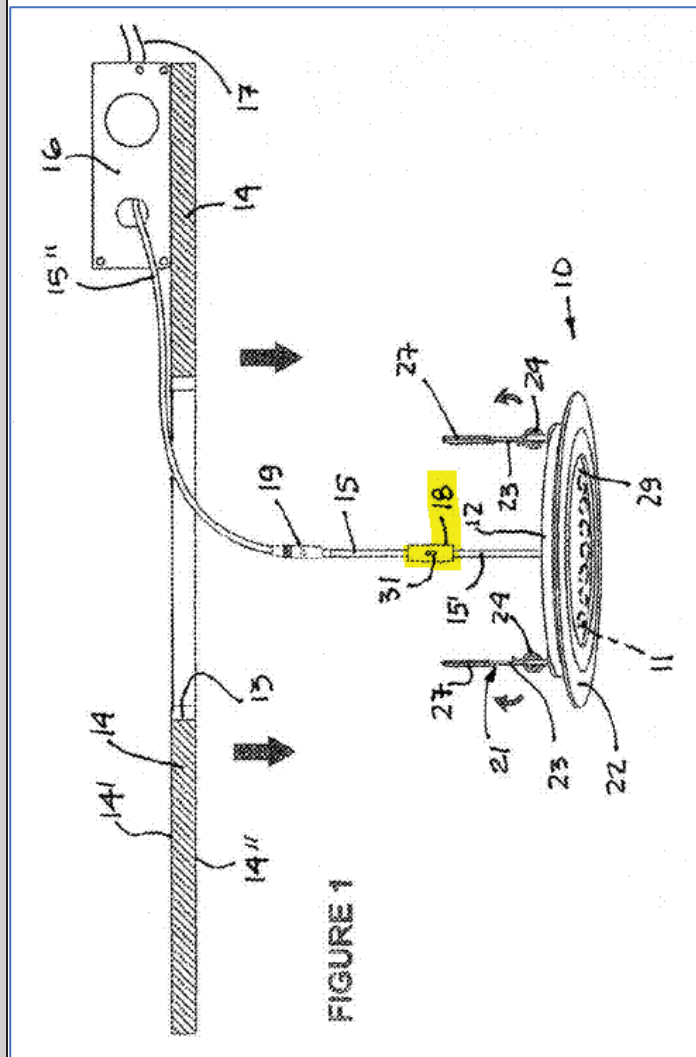
"The 3-way lamp head 120 has two kinds of LED arrays with different color temperatures (not shown) therein. The 3-way lamp Socket 110 is connected to a mains power Supply and the 3-way lamp head 120. A 3-way switch 115 is arranged on the 3-way lamp socket 110."

To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); see *also id.* at 1:8-15 ("The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED's of different correlated color temperature (CCT) and wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole."); Fig. 1.

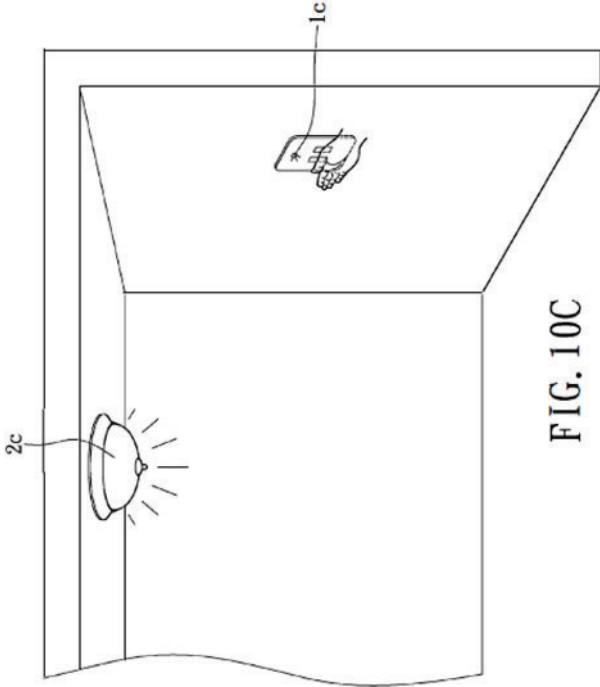
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	FIGURE 1 Further, the CCT switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is "accessible and visible" to the user when the housing is removed from its installed location (<i>id.</i>, Abstract, 4:16-29). Fig. 1. Thus, Chaimberg discloses a luminaire "wherein the switch is accessible to a user when the housing is removed from its installed location" as recited in claim 12 of the '336 Patent. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	Chou discloses a switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire. See e.g., Chou at 4:26-29:

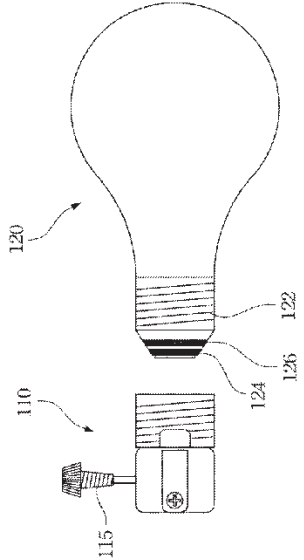
'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	"In other words, when the 3-way switch 115 is switched to the initial operation mode, the color temperature adjustable LED lamp 100 of the present invention is turned off. FIG. 2B is a schematic switch circuit diagram" <i>See e.g.</i>, Chou at 4:38-42: "In other words, when the 3-way switch 115 is switched to the first operation mode, the color temperature of the light emitted by the color temperature adjustable LED lamp 100 is the first color temperature of the first LED array 130." <i>See e.g.</i>, Chou at 5:2-8: "In other words, when the 3-way switch 115 is switched to the third operation mode, the third color temperature of the light emitted by the color temperature adjustable LED lamp 100 is equivalent to the color temperature of the light mixed from the light emitted by the first LED array 130 and the light emitted by the second LED array 140." To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen. For example, the LED light fixture of Chaimberg includes a switch 18. <i>See</i> Chaimberg at 3:49-60 ("As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15' and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); <i>see also id.</i> at 2:38-45 ("The cable has a predetermined length to permit the LED light fixture to be withdrawn from the fixture mounting hole a predetermined distance to provide access to a selector switch mounted in the cable to permit selective activation of either one of the at least two sets of LED's or both sets of LED's simultaneously to cause the LED light fixture to generate light at a selected desired correlated color temperature (CCT)."); Chaimberg at 4:30-5:10; Fig. 1.



Thus, Chaimberg discloses “[a] switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire,” as recited in the preamble of claim 13 of the ’336 Patent.

Then further discloses: “FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space.” Chen et al 22:61-23:15.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 10C Chen at Fig. 10C. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
13[a]. "a body;"	Chou discloses a body. See e.g., Chou at Fig. 1:

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	<u>100</u>  Fig. 1 To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg. For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," that includes a body. Chaimberg at 4:30-48; <i>see also id.</i> at 4:37-5:10; Fig. 1.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"	

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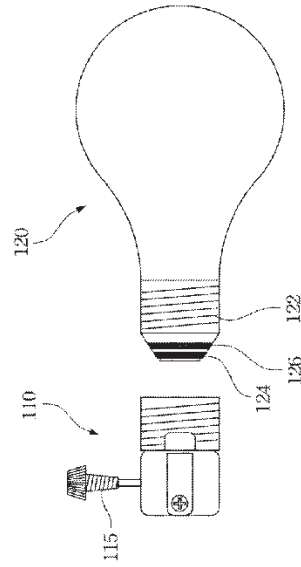


Fig. 1

See e.g., Chou at Fig. 2A:

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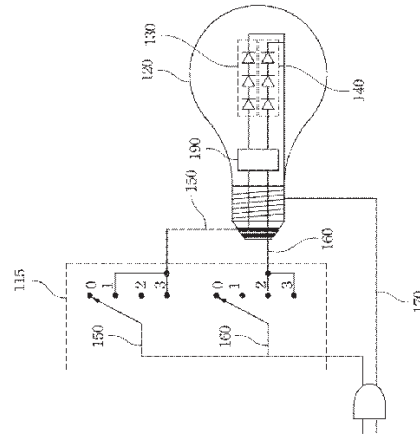


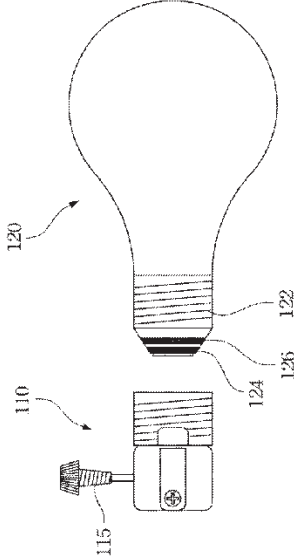
Fig. 2A

See e.g., Chou at 4:2-12:

"The 3-way lamp Socket 110 is connected to a mains power Supply and the 3-way lamp head 120. A 3-way switch 115 is arranged on the 3-way lamp socket 110. The mains power supply includes a ground

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	wire, a first live wire and a second live wire. The 3-way lamp head 120 has an exposed ground wire contact 122, a first live wire contact 124 and a second live wire contact 126. The 3-way lamp socket 110 also has contacts therein each connected to the exposed ground wire contact 122, the first live wire contact 124 and the second live wire contact 126." To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg. For example, the switch CCT selector switch 18 is mounted to the electrical cable 18. <i>See</i> Chaimberg at 3:49-60 ("As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15 and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair."); <i>see also id.</i> at Fig. 1.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	FIGURE 1 Thus, the switch 18 includes "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire" as recited by element 13[b] of claim 13 of the '336 Patent. Accordingly, Chou alone discloses this limitation or, in the alternative, Chou in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
13[c]. "an actuator disposed on the body, wherein the actuator has a range of positions,"	Chou discloses an actuator disposed on the body, wherein the actuator has a range of positions. See e.g., Chou at Fig. 1:

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
	<u>100</u>  Fig. 1 See <i>e.g.</i>, Chou at 4:13-19: “The 3-way switch 115 has four operation modes, so as to change the conducted wiring line by operating the 3-way switch 115 and further turn on the corresponding LED array. Referring to FIGS. 2A-2D, they illustrate different operation modes of the 3-way switch 115 and the light-emitting states of the 3-way lamp head 120 corresponding to the different operation modes.” To the extent that Chou does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg and/or Chen. For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-63.

'336 Claim/Element	U.S. Patent No. 8,890,436 ("Chou") Alone And/Or in View of The Secondary References Identified Above
third position, a fourth position, and a fifth position."	
19. "The switch of claim 13, wherein the body is configured to be disposed within a junction box."	See claim 7.

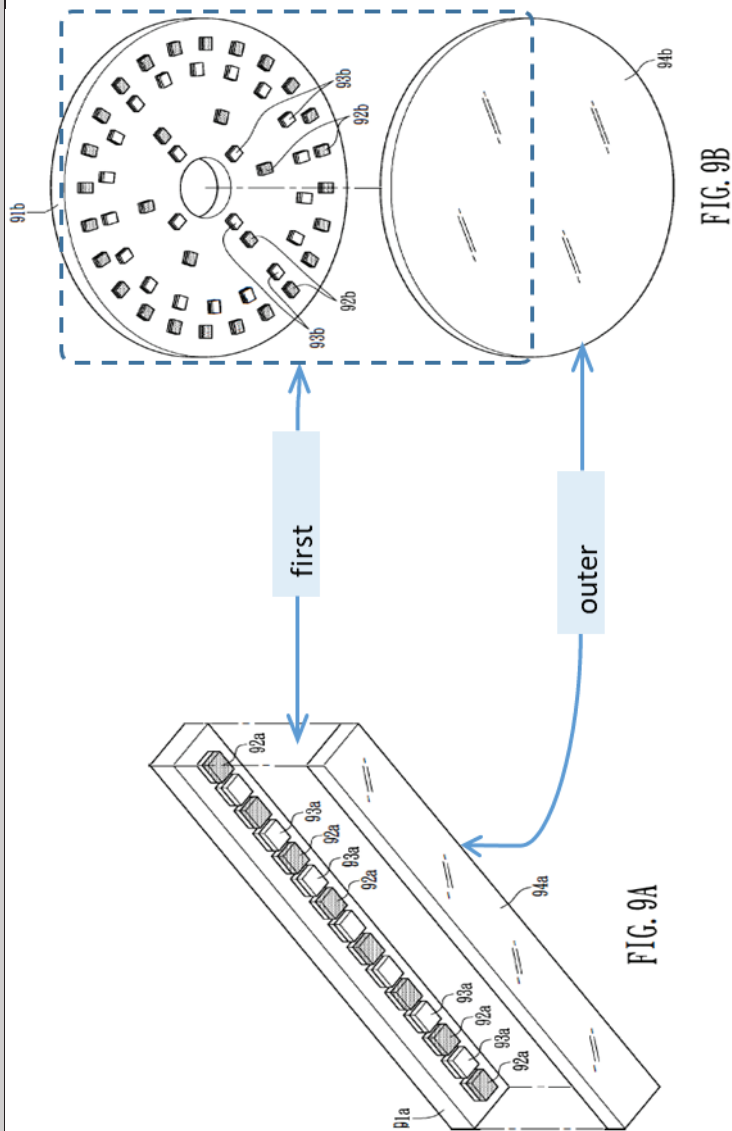
U.S. Patent No. 10,136,503 (“Chen”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 10,136,503 (“Chen”).

Secondary Reference: U.S. Patent No. 10,234,091 (“Chaimberg”).

’336 Claim/Element	U.S. Patent No. 10,136,503 (“Chen”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Chen discloses the preamble of claim 1 of the ’336 Patent. For example, Chen discloses: “A microcontroller-based multifunctional electronic switch for lighting control uses a detection device to sense and convert at least one external control signal into at least one message carrying sensing signal interpretable to a microcontroller. Based on a signal format of the message carrying sensing signal received, the microcontroller recognizes working mode chosen by the external control signal and thereby executes an appropriate lighting control process. The system and method of the present invention may be equally applicable to detection design, such as touch less and direct touch interface implemented by infrared ray sensor, push button or wireless control device in conjunction with APP preloaded, for performing multiple working modes including on/off mode, dimming mode, color temperature tuning mode, color temperature switching mode, color temperature dim to warm mode, commanding mode for controlling a lighting family comprising a plurality of member lamps remotely located or delay shut off mode.” Chen at Abstract. Also, Chen discloses: “wherein for performing each of said at least two color temperature performances, said first control signal and said second control signal are designed and predetermined to operate with an arrangement that said conduction rate of said first controllable switching element and said conduction rate of said second controllable switching element are reversely and complementarily adjusted such that the total light intensity of said first LED lighting load and said second LED lighting load is maintained at a constant level while a mingled color temperature of a diffused light of said first LED lighting load and said second LED lighting load through a light diffuser is adequately adjusted according to said predetermined combination of conduction rates for respectively controlling said first controllable switching element and said second controllable switching element.” Chen at 29:42-58. Also seen Chen at Claim 1, 12 and 17. Chen also discloses “a microcontroller to receive and interpret said at least one message carrying sensing signal generated by said at least one detection device,” Chen at 26:5-7. Thus, Chen discloses a luminaire as recited in the preamble of claim 1 of the ’336 Patent.

'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
1[a]. "a housing comprising at least one outer surface that forms a first cavity;"	Chen discloses element 1[a] of claim 1 of the '336 Patent. For example, Chen discloses: "Please refer to FIG. 9 A, a lighting apparatus having the microcontroller-based multifunctional electronic switch is provided. The lighting apparatus comprises a base 91a, a first lighting load 92a, a second lighting load 93a, a diffuser 94a and a microcontroller based electronic switch (not shown in the figure). The base 91a is for disposing the first lighting load 92a, the second lighting load 93a and the microcontroller based electronic switch which has been described in previous embodiments. The operation of the microcontroller based electronic switch related to lighting characteristic control of the first lighting load 92a and the second lighting load 93a can be referred to previous embodiments, thus the redundant information is not repeated. For diffusing or spreading out or scattering the different color temperature light emitted by the first lighting load 91a and the second lighting load 92a, a diffuser 94a is provided to cover the first lighting load 92a and the second lighting load 93a. Further, the first lighting load 92a and the second lighting load 93a can be alternatively disposed on the base 91a. As shown in FIG. 9B, the first lighting load 92a comprises a plurality of lighting elements, and the second lighting load 93a comprises a plurality of lighting elements, wherein a lighting element of the second lighting load 93a is inserted between the two adjacent lighting elements of the first lighting load 92a for obtaining uniform color temperature of the diffused light, but present disclosure is not limited thereto." Chen at 20:24-50.

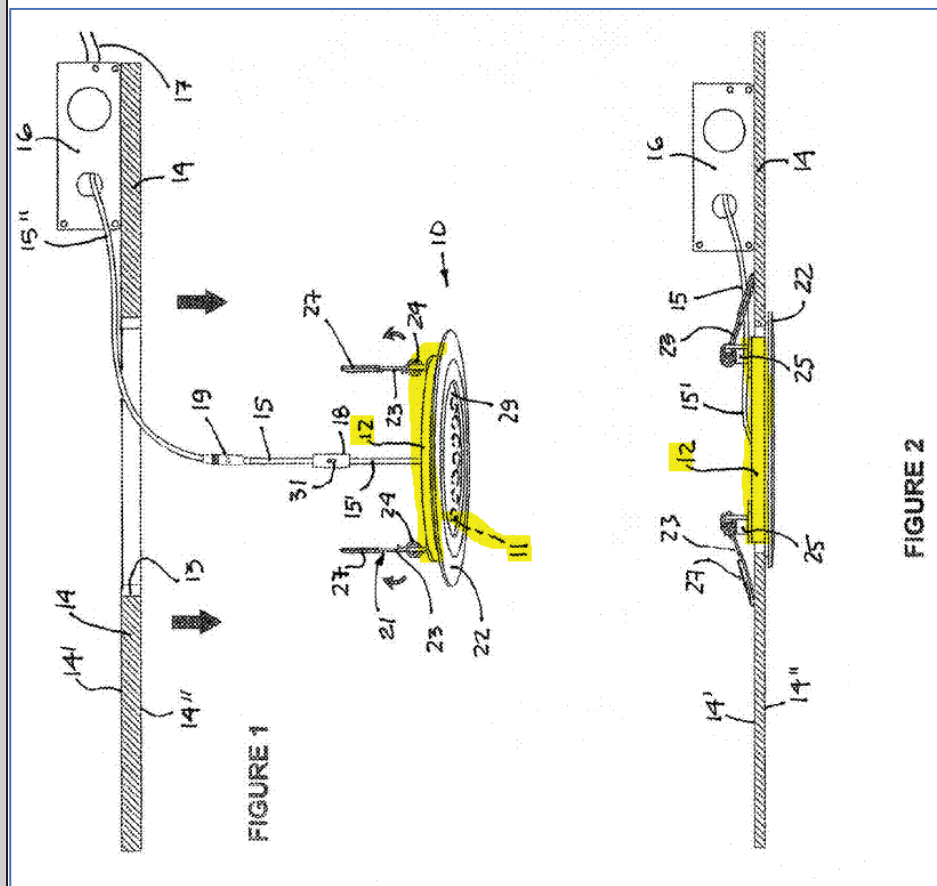


Chen at Figs. 9A, 9B.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the LED light fixture includes a “light housing 12” and the “LED’s 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10.” *See*, Chaimberg at 2:66-3:12.

Further, Figs. 1 and 2 depict the housing as shown below. See Chaimberg at Figs. 1 and 2.

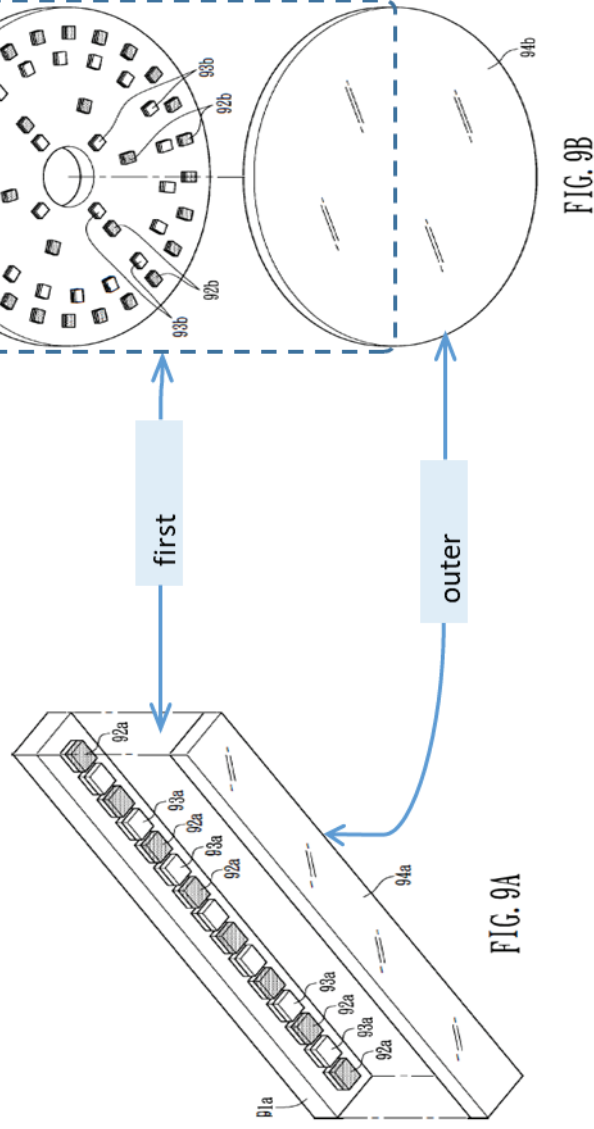


Further, the housing 12 includes a circumferential flange 22, as shown above. Fig. 1, 2:32-34, 3:61-4:3. The housing 12 also includes a “wall” that extends vertically from the circumferential flange 22, towards ceiling sheeting 14. *Id.*, 3:3-5. As shown in Figure 1, outer surfaces of the wall and the circumferential flange 22 form a cavity that holds LEDs 11. *Id.* (LEDs 11 are mounted “inside a wall of the housing 12”).

Thus, Chaimberg comprises housing comprising at least one outer surface that forms a first cavity as recited in element 11a] of claim 1 of the '336 Patent.

Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

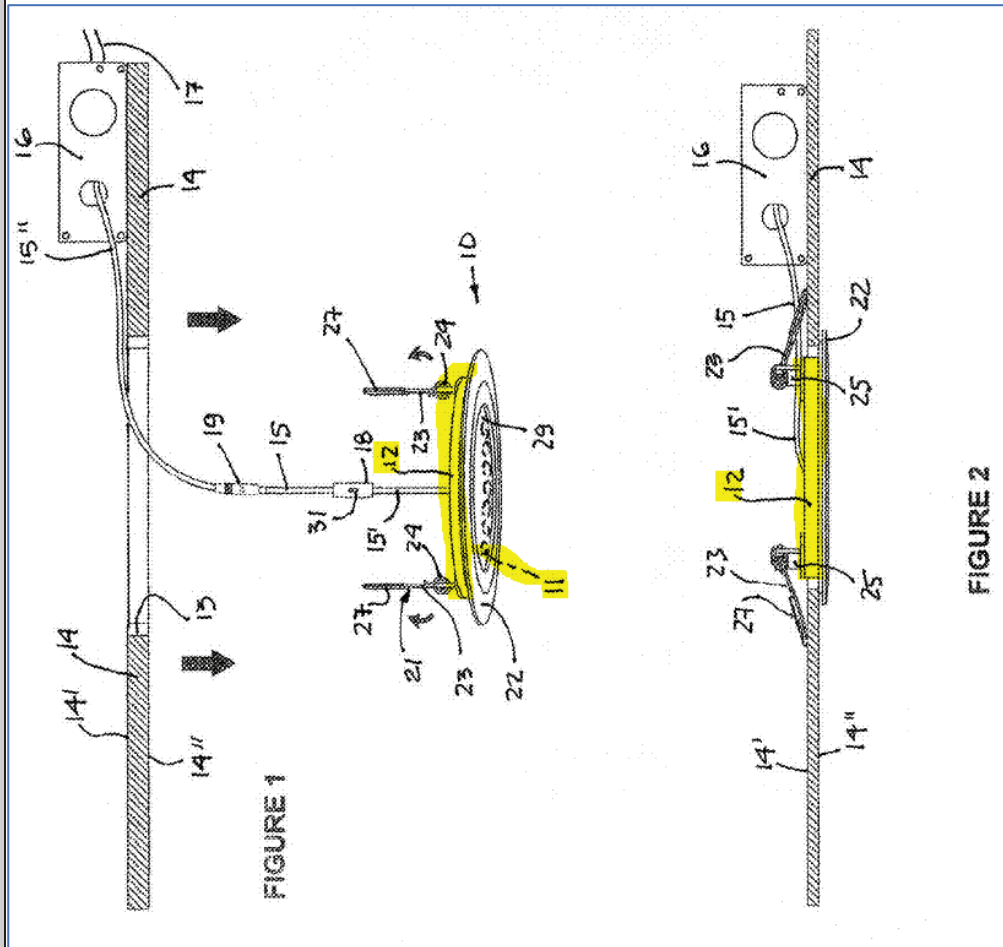
'336 Claim/Element	U.S. Patent No. 10,136,503 (“Chen”) Alone And/Or in View of The Secondary References Identified Above
1[b]. “at least one electrical component disposed, at least in part, within the first cavity;”	Chen discloses element 1[b] of claim 1 of the '336 Patent. For example, Chen discloses: “Please refer to FIG. 9 A, a lighting apparatus having the microcontroller-based multifunctional electronic switch is provided. The lighting apparatus comprises a base 91a, a first lighting load 92a, a second lighting load 93a, a diffuser 94a and a microcontroller based electronic switch (not shown in the figure). The base 91a is for disposing the first lighting load 92a, the second lighting load 93a and the microcontroller based electronic switch which has been described in previous embodiments. The operation of the microcontroller based electronic switch related to lighting characteristic control of the first lighting load 92a and the second lighting load 93a can be referred to previous embodiments, thus the redundant information is not repeated. For diffusing or spreading out or scattering the different color temperature light emitted by the first lighting load 91a and the second lighting load 92a, a diffuser 94a is provided to cover the first lighting load 92a and the second lighting load 93a. Further, the first lighting load 92a and the second lighting load 93a can be alternatively disposed on the base 91a. As shown in FIG. 9B, the first lighting load 92a comprises a plurality of lighting elements, and the second lighting load 93a comprises a plurality of lighting elements, wherein a lighting element of the second lighting load 93a is inserted between the two adjacent lighting elements of the first lighting load 92a for obtaining uniform color temperature of the diffused light, but present disclosure is not limited thereto.” Chen at 20:24-50.



Chen at Figs. 9A, 9B.

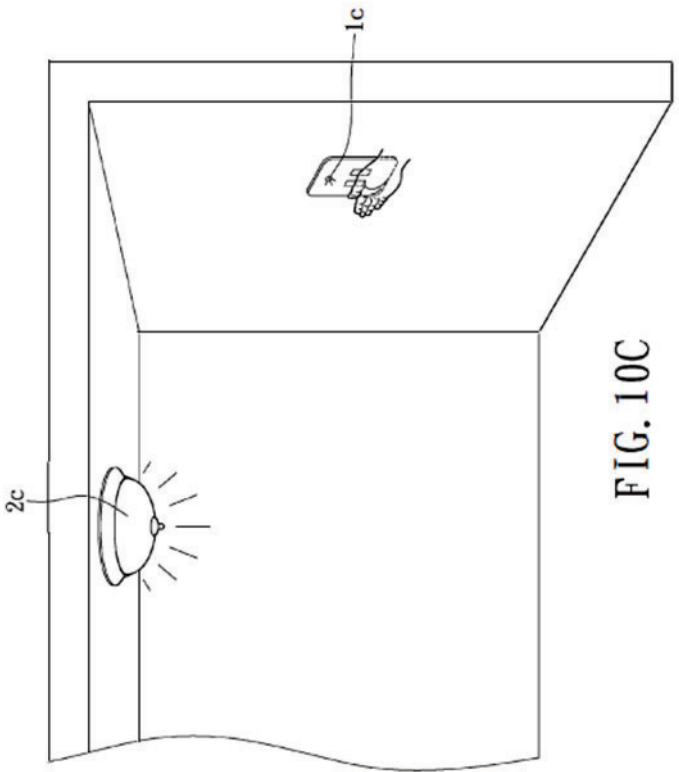
To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the LED light fixture of Chaimberg includes a "light housing 12" and the "LED's 11 are mounted ... in alteration inside a wall of the housing 12 of the light fixture 10." See, Chaimberg at 2:66-3:12.



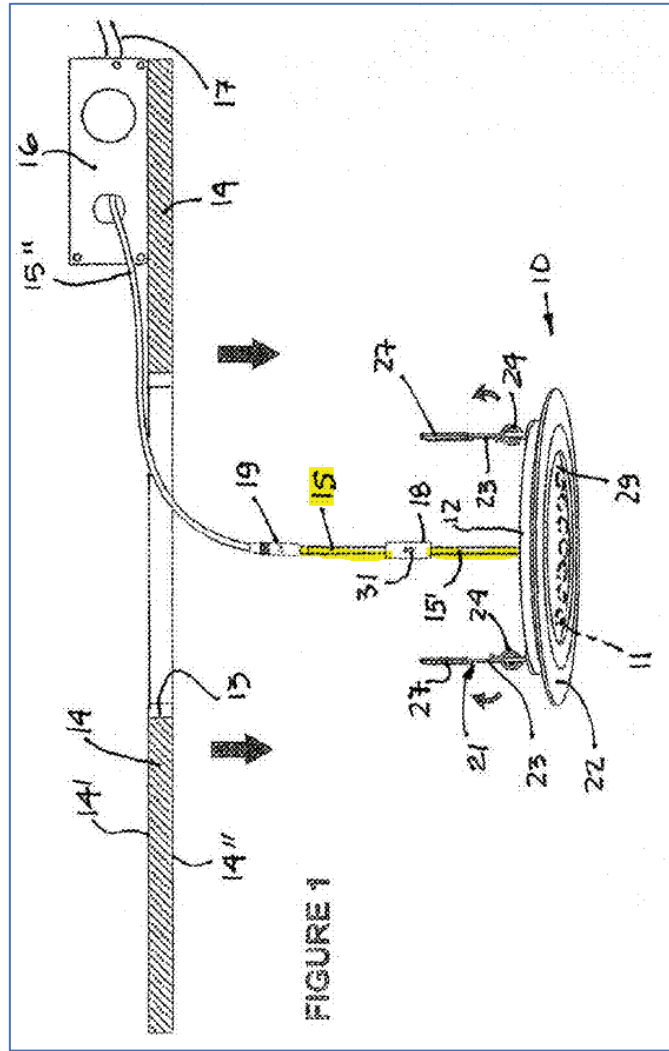
Thus, the LEDs mounted within the housing 12 of Chaimberg are “at least one electrical component disposed, at least in part, within the first cavity” of the housing as recited in element 1[b] of claim 1 of the ’336 Patent.

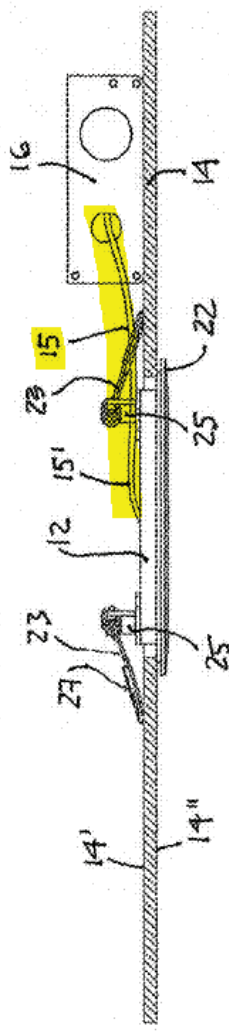
Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

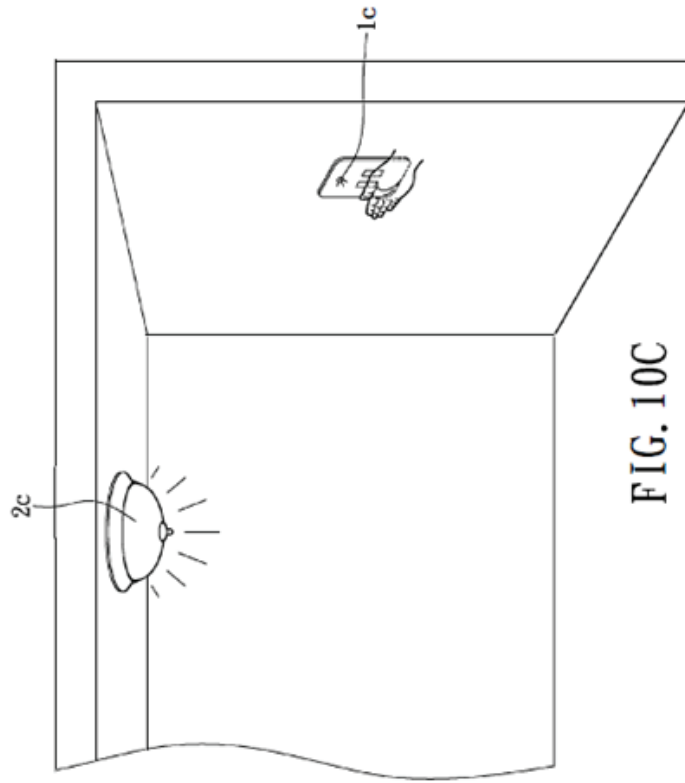
'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	Chen discloses element 1[c] of claim 1 of the '336 Patent. For example, Chen discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.  FIG. 10C Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the LED light fixture of Chaimberg includes "a cable 15 [that] is secured at one end 15', to the light housing 12 and has wires therein secured to the two sets of LED's to supply driving current to each of the sets and such is obvious to a person skilled in the art. The cable 15 is also secured at a far end 15' to a driver circuit 20 as illustrated in FIG. 3. The driver circuit 20 is mounted in a driver housing 16 to which is supplied line voltage from live wire 17." Chaimberg at 3:14-25; *See also* Chaimberg at 3:49-60, Figs. 1 and 2.



'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	 FIGURE 2 Thus, the cable 15 of the LED light fixture of Chaimberg is “an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component” as recited in element 1[c] of claim 1 of the '336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
1[d]. “a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,”	Chen discloses element 1[d] of claim 1 of the '336 Patent. For example, Chen discloses: “FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1e by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space.” Chen at 22:61-23:15.



Chen at Fig. 10C.

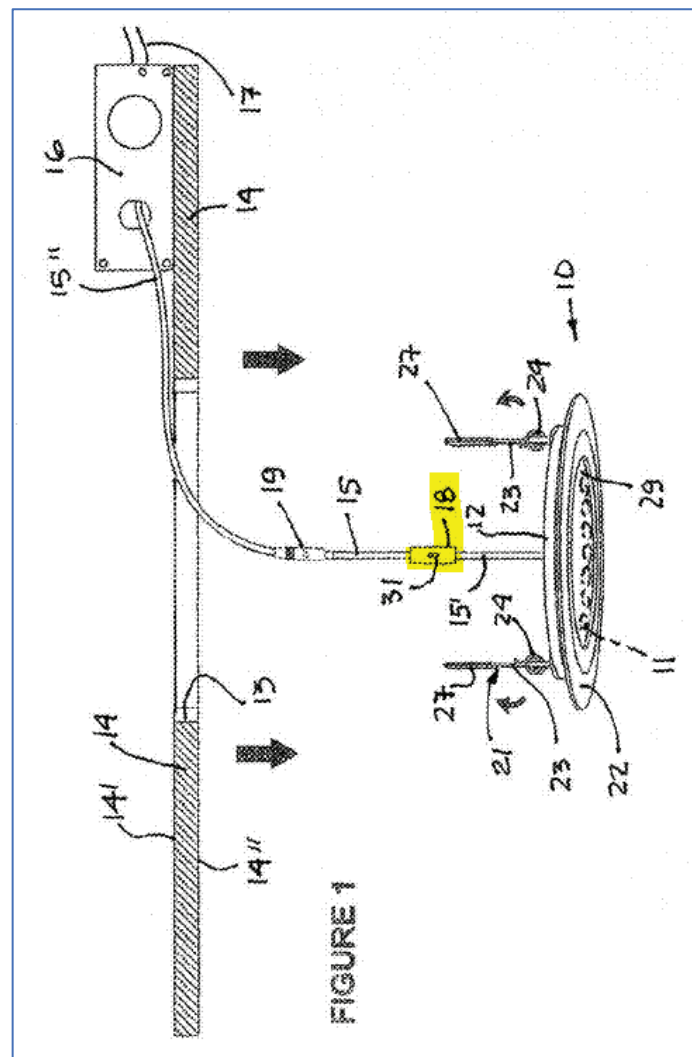
Also, Chen discloses: "The detection device is for detecting an external motion signal played by a user and converting said external motion signal into a message carrying sensing signal." and "In one exemplary embodiment, the detection device is an infrared ray sensor comprising a means for emitting infrared light to form a defined infrared ray detecting zone and a means for detecting infrared light reflected from an object moving into said infrared ray detecting zone." Chen at 2:28-31, 2:50-54.

Chen also discloses: "wherein for performing each of said at least two color temperature performances, said first control signal and said second control signal are designed and predetermined to operate with an arrangement that said conduction rate of said first controllable switching element and said conduction rate of said second controllable switching element are reversely and complementarily adjusted such that the total light intensity of said first LED lighting load and said second LED lighting load is maintained at a constant level while a mingled color temperature of a diffused light of said first LED lighting load and said second LED lighting load through a light diffuser is adequately adjusted according to said predetermined combination of conduction rates for respectively controlling said first controllable switching element and said second controllable switching element." Chen at 29:42-58. Also seen Chen at Claim 1, 12, 17 and 54.

Chen also discloses “a microcontroller to receive and interpret said at least one message carrying sensing signal generated by said at least one detection device,” Chen at 26:5-7.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 is mounted on the electrical cable 15. See Chaimberg at 3:49-60 (“As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15' and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED's or to replace the light transmitting lens 29 or for any repair.”); see *also id.* at Fig. 1.



'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	Thus, the switch 18 of Chaimberg is "a switch coupled to the electrical cable [15], wherein the switch is disposed remotely from the housing" as recited in element 1[d] of claim 1 of the '336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Chen discloses element 1[e] of claim 1 of the '336 Patent. For example, Chen discloses: "FIG. 1 is a block diagram of a microcontroller based electronic switch using an infrared ray sensor as a detection device applied for two AC lighting loads with different color temperatures powered by an AC power source according to an exemplary embodiment of the present disclosure." Chen at 4:43-47. Chen further discloses: "With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions...." Chen at 4:30-59. "When the slide button 31 is positioned to the middle, at a third position of the switch, ... When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT)." Chen at 4:60-5:10.

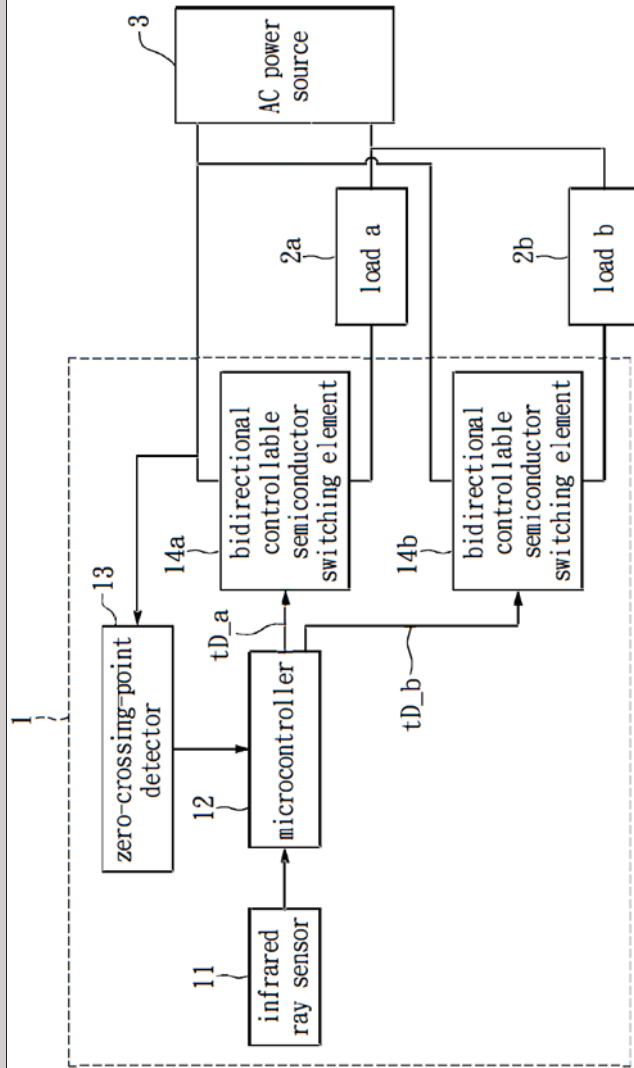


FIG. 1

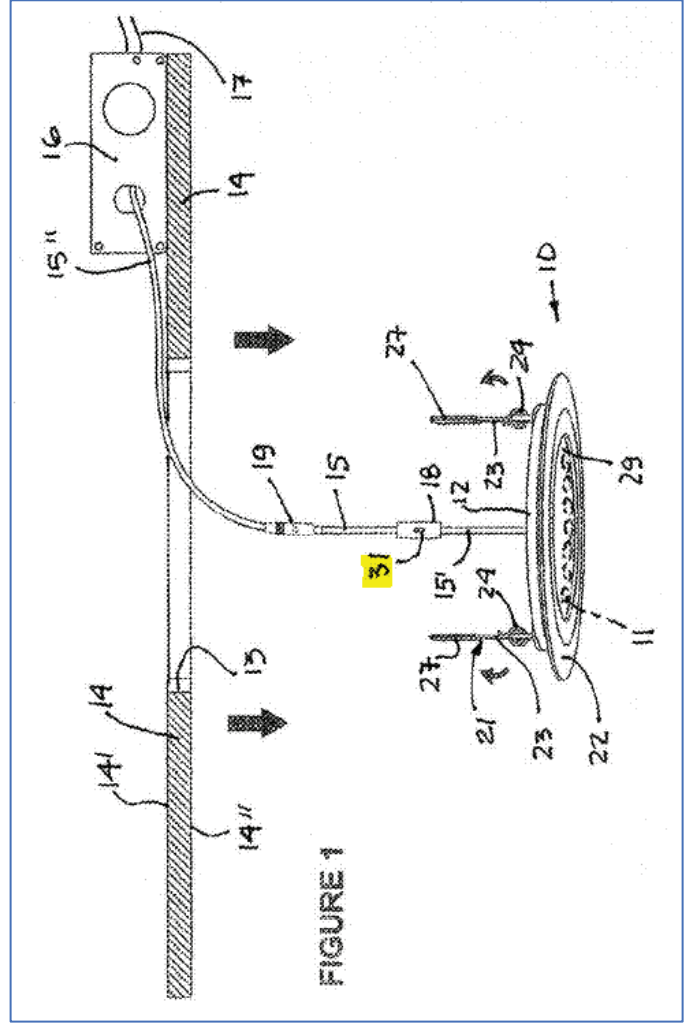
Chen at Fig. 1.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

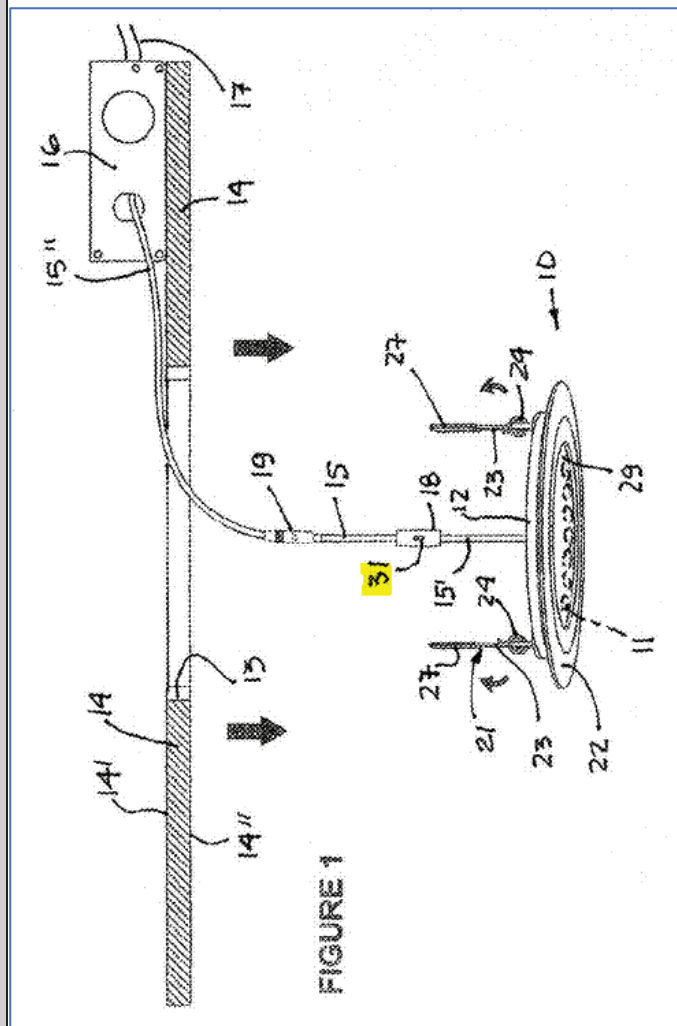
For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-49.

See also Chaimberg at 4:37-5:10 ("At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver

current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30.... When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads of the 5000 K LED's. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30'. ... When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).")



'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	Thus, the switch 18 of Chaimberg is a switch with "a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire" as recited in claim 1 of the '336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Chen discloses claim 3 of the '336 Patent. Chen discloses: "The direct touch interface on the other hand uses a wired method to receive the external control signal set by an user, wherein the external control signal can be generated from a push button, a touch pad, a voltage divider, or a power interruption switch or button operated by the user, or a conduction rate of a phase controller set by the user, wherein, if the external control signal is an analogue signal, a conversion circuitry may be included in the detection device or as a virtual circuitry programmable embedded in the microcontroller to convert the analogue signal into the message carrying sensing signal readable and interpretable to the microcontroller." Chen at 25:36-48. To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg. For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," each of these positions are distinct and correspond to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-48.



See also Chaimberg at 4:37-5:10 (“At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED’s 30, which could burn the LED’s. When the diode 35 conducts, the driver current at its cathode 39 completes the current supply circuit to drive the 3000 K (CCT) diode set 30.... When the slide button 31 is moved to the right side to a second position, the contacts 6 and 5, as well as contacts 3 and 4 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 4 is bridged to contact 3 which is connected to the anode 40 of the diode 41 through conductor 42. The resistance 37 lowers the input current at terminal 38 to prevent a high current impact on the leads of the 5000 K LED’s. The cathode 44 of driver diode 41 is connected to the supply current at contact 4 to complete the current supply circuit to drive the 5000 K (CCT) LED diode set 30’ ... When the slide button 31 is positioned to the middle, at a third position of the switch, contacts 7 and 6, as well as contacts 2 and 3 are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 7 is bridged to contact 5 and to the anodes 34 and 40 of the driver diodes 35 and 41, respectively, through conductors 45, 47 and 48. The cathode 39 of the driver diode 35 is connected to the terminal 38 through

'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	resistance 37 and conductors 46 and 47. The cathode 44 of the driver diode 41 is connected to the terminal 38 via resistance 43 and conductors 47 and 48. Accordingly, both of the driver diodes 35 and 41 are in their conductive state to supply drive current to both sets of LED' 30 and 30'. Resistances 49 and 50 are connected in the circuit to equally distribute the current to the LED sets 30 and 30'. When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT).") Thus, "each position of the plurality of positions [of the switch 18 of Chaimberg] is discrete" as recited in claim 3 of the '336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Chen alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious claim 4 of the '336 Patent. For example, Chen discloses: "FIG. 1 is a block diagram of a microcontroller based electronic switch using an infrared ray sensor as a detection device applied for two AC lighting loads with different color temperatures powered by an AC power source according to an exemplary embodiment of the present disclosure." Chen at 4:43-47. Chen further discloses: "With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions...." Chen at 4:30-59. "When the slide button 31 is positioned to the middle, at a third position of the switch, ... When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT)." Chen at 4:60-5:10.

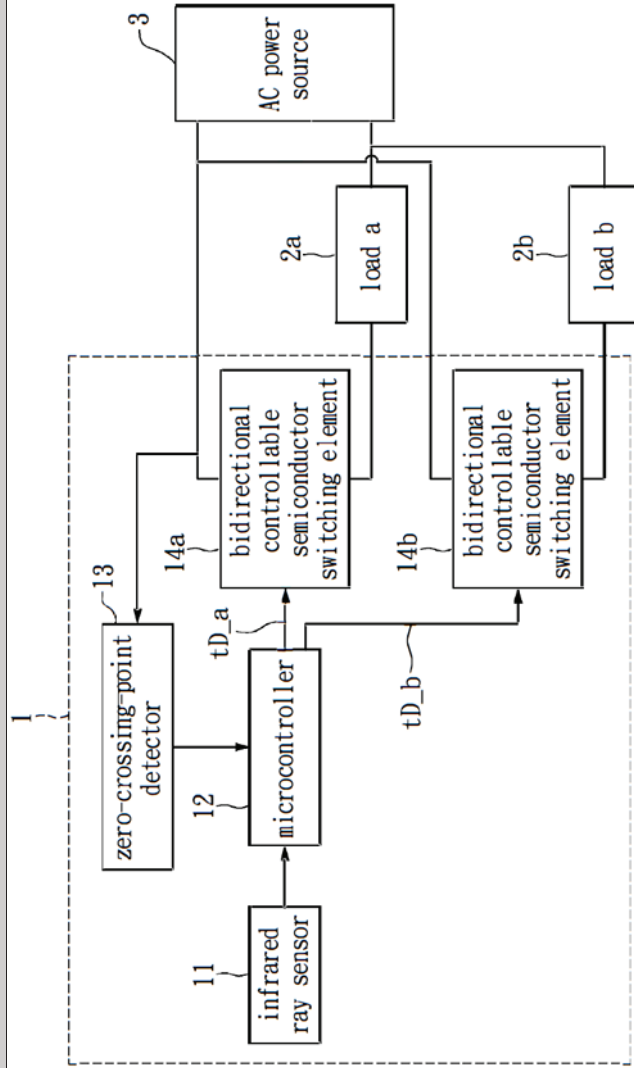


FIG. 1

Chen at Fig. 1.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture. It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs.

Accordingly, Chaimberg alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious a switch 18 of Chaimberg “wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position.”

'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	Chen alone, or in view of the knowledge of a POSITA, or in combination with other prior art references, renders obvious claim 5 of the '336 Patent. For example, Chen discloses: "FIG. 1 is a block diagram of a microcontroller based electronic switch using an infrared ray sensor as a detection device applied for two AC lighting loads with different color temperatures powered by an AC power source according to an exemplary embodiment of the present disclosure." Chen at 4:43-47. Chen further discloses: "With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions...." Chen at 4:30-59. "When the slide button 31 is positioned to the middle, at a third position of the switch, ... When the combination of the two LED sets 30 and 30' are supplied drive current, the luminance generated by the two sets produces a light color of the order of 4000 Kelvin (CCT)." Chen at 4:60-5:10.

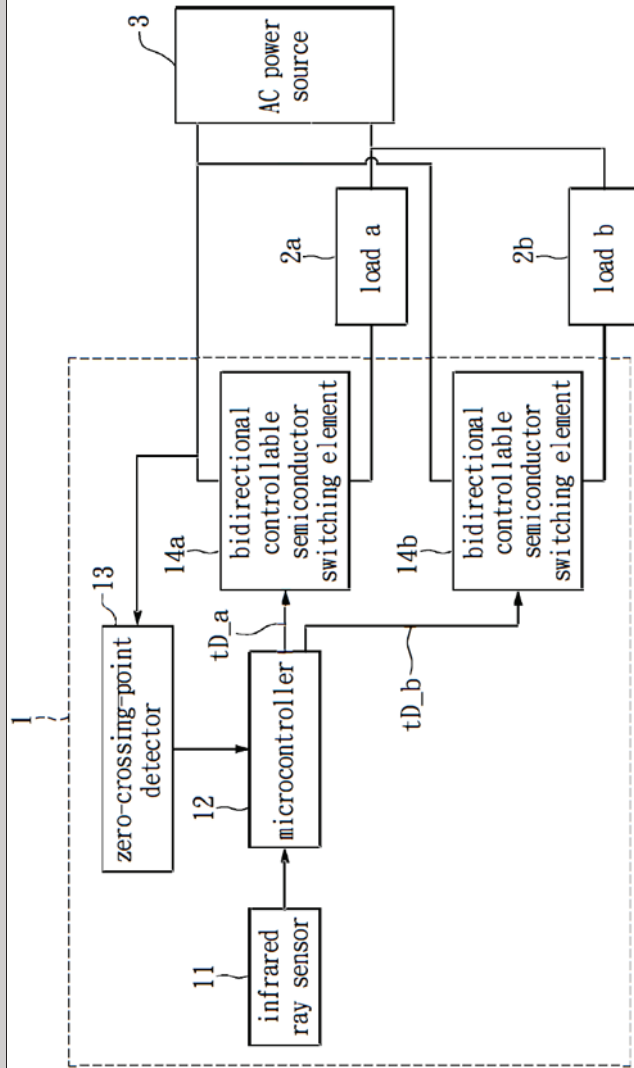


FIG. 1

Chen at Fig. 1.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, as discussed above with respect to claim 3 of the '336 Patent, Chaimberg discloses an LED lighting fixture with a switch 18 with three distinct positions corresponding to different CCT outputs from the LED light fixture (3000 K, 4000K, and 5000K). It would have been obvious for a POSA to modify the switch 18 of Chaimberg to include two additional positions that allow two additional CCT outputs of 3500K and 2700K.

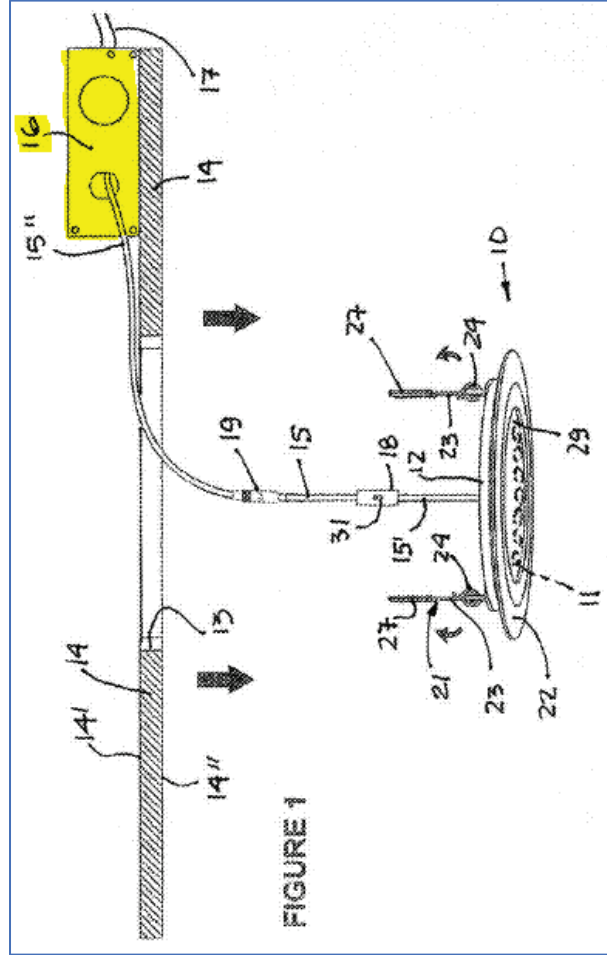
Accordingly, Chaimberg alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious a switch 18 of Chaimberg "wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch

'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources.” Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
7. “The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch.”	Chen alone, or in the knowledge of a POSITA, or in combination with other prior art references renders, obvious claim 4 of the '336 Patent. For example, Chen discloses: “The direct touch interface on the other hand uses a wired method to receive the external control signal set by an user, wherein the external control signal can be generated from a push button, a touch pad, a voltage divider, or a power interruption switch or button operated by the user, or a conduction rate of a phase controller set by the user, wherein, if the external control signal is an analogue signal, a conversion circuitry may be included in the detection device or as a virtual circuitry programmable embedded in the microcontroller to convert the analogue signal into the message carrying sensing signal readable and interpretable to the microcontroller.” Chen at 25:36-48. FIG. 10C

Chen at Fig. 10C.

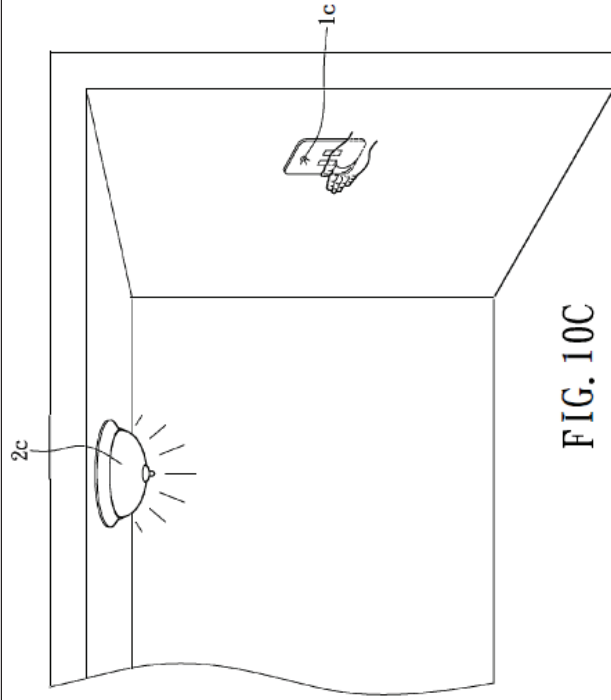
To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the 'Chaimberg includes a driver housing 16 (*i.e.* a junction box) with an internal cavity, "the driver circuit 20 is mounted in the driver housing 16." Chaimberg at 3:23-24, 4:30-37. The driver circuit 20 controls the temperature output based on the setting of the switch 18. *See* Chaimberg at 4:30-37 ("With reference now to FIG. 3 there will be described the operation of the driver circuit 20 which is mounted in the driver housing 16. The driver circuit 20 drives either of the LED sets schematically represented at 30 for the 3000 Kelvin set and at 30' for the 5000 Kelvin set. The switch 18 is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions."); *see also id.* at Fig. 1.



While Chaimberg discloses that locating the CCT switch 18 on the electrical cable 15, away from the junction box (*i.e.* driver housing 16). A POSA would understand that Chaimberg discloses that the CCT switch 18 could be located on/in the driver housing 16.

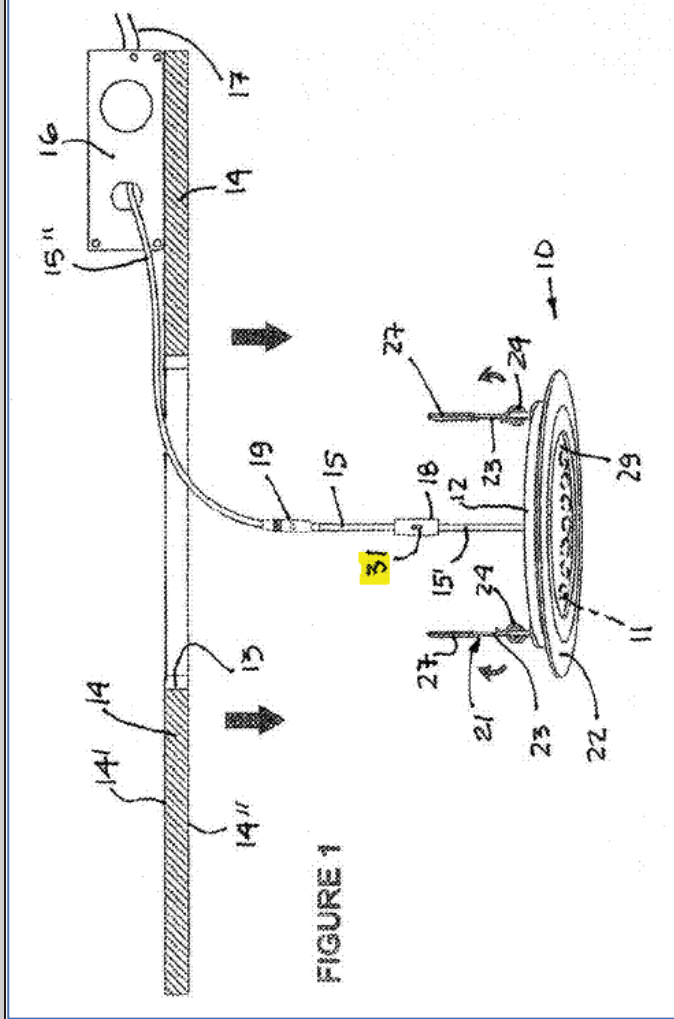
'336 Claim/Element	U.S. Patent No. 10,136,503 ("Chen") Alone And/Or in View of The Secondary References Identified Above
	Accordingly, Chaimberg alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious an LED light fixture with "a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch" as recited in claim 7 of the '336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
9. "The luminaire of claim 1, wherein the switch is a slide switch."	Chen discloses claim 9 of the '336 Patent. For example, Chen discloses: "The detection device is for detecting an external motion signal played by a user and converting said external motion signal into a message carrying sensing signal." Chen at 2:28-31. "In one exemplary embodiment, the detection device is an infrared ray sensor comprising a means for emitting infrared light to form a defined infrared ray detecting zone and a means for detecting infrared light reflected from an object moving into said infrared ray detecting zone." Chen at 2:50-54. Chen then discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.



Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, "[t]he switch 18 is a toggle switch provided with a slide button 31." Chaimberg at 4:34-37; *see also id.* at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.").



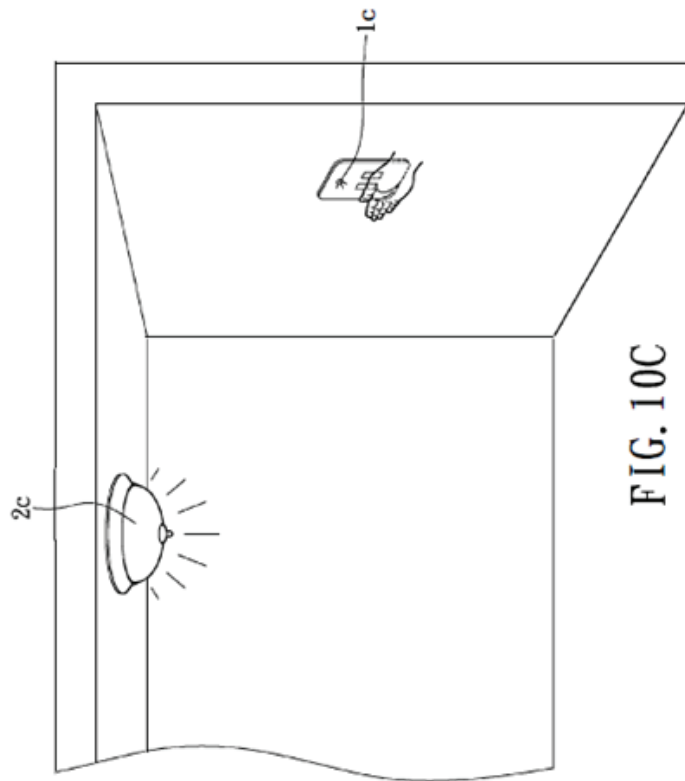
Thus, Chaimberg discloses a LED light fixture wherein the CCT switch is a slide switch as recited in claim 9 of the '336 Patent.

Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."

Chen discloses claim 11 of the '336 Patent.

For example, Chen discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.



Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 is inaccessible when housing is installed. Chaimberg at (57) (“The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED’s or both sets of LED’s simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.”); *see also id.* at Fig. 2.

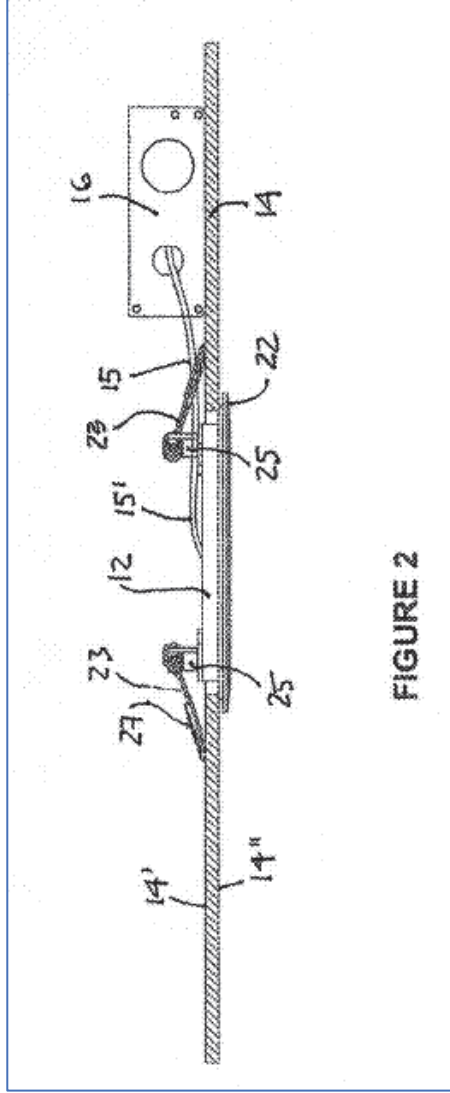


FIGURE 2

Further, the LED fixture is “adapted to be removably secured in a housing mounting hole in a ceiling sheeting material,” the “selector switch 18 is mounted [in/]on the cable 15” (Chaimberg at Abstract, 3:49-54), and the selector switch 18 “is made accessible and visible by simply withdrawing the light fixture from” the ceiling. *Id.*, Abstract. When the light fixture is “retracted from its fixture mounting hole,” the switch 18 is below the ceiling 14 and accessible to the user. *Id.*, 3:13-15, Fig. 1. Fig. 2 shows the light fixture “mounted in the fixture mounting hole.” *Id.*, 2:58-61, Fig. 2. The cable 15 (where the switch 18 is mounted) is on the inner side of the “ceiling sheeting material 14” and inaccessible when the LED light fixture is installed. *Id.*, 4:16-29, Fig. 2.

Thus, Chaimberg discloses a luminaire “wherein the switch is inaccessible when the housing is installed” as recited in claim 11 of the ’336 Patent.

Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."

Chen discloses claim 12 of the '336 Patent.

For example, Chen discloses: "FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user's hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user's hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space." Chen at 22:61-23:15.

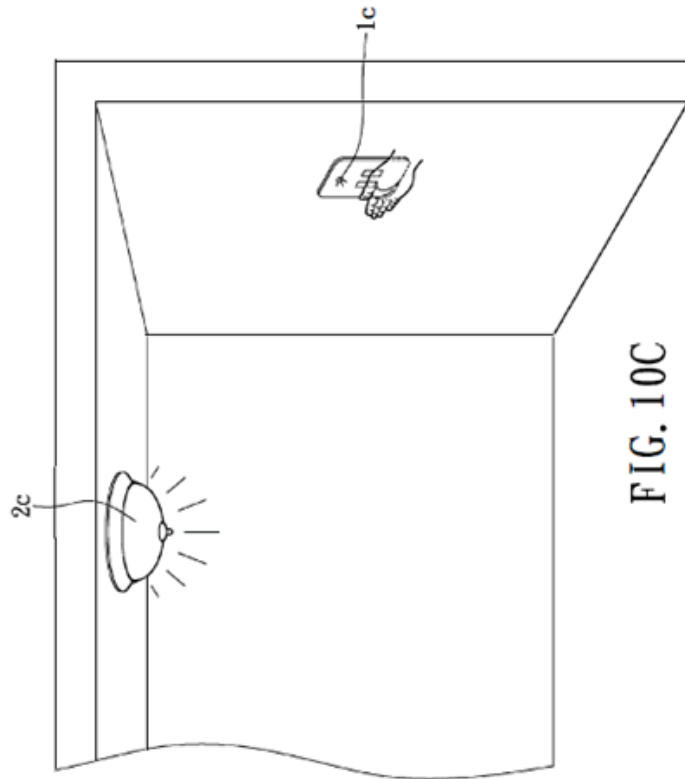
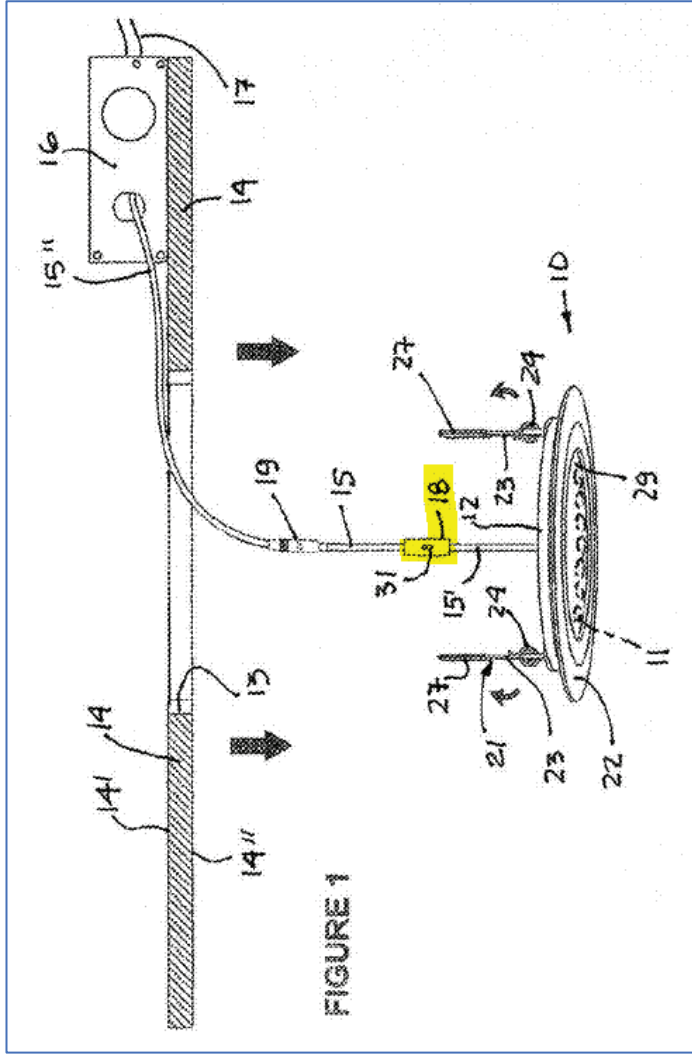


FIG. 10C

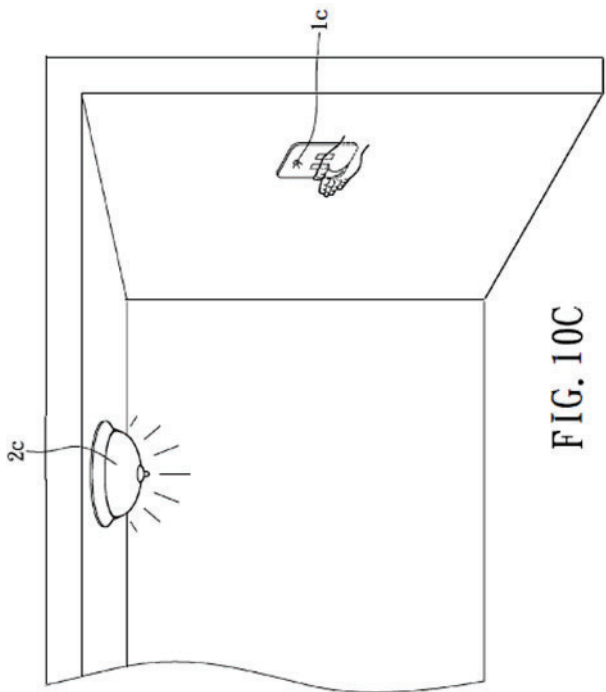
Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) (“The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED’s or both sets of LED’s simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.”); *see also id.* at 1:8-15 (“The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED’s of different correlated color temperature (CCT) and wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole.”); Fig. 1.



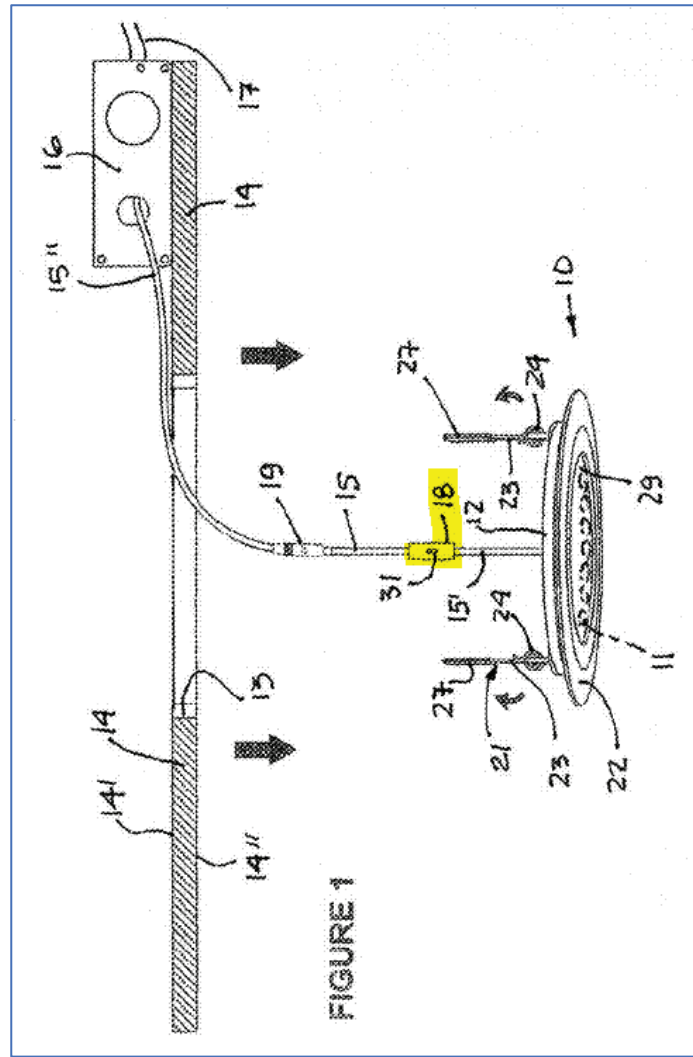
Further, the CCT switch 18 “is made accessible and visible by simply withdrawing the light fixture from” the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is “accessible and visible” to the user when the housing is removed from its installed location (*id.*, Abstract, 4:16-29). Fig. 1.

	Thus, Chaimberg discloses a luminaire “wherein the switch is accessible to a user when the housing is removed from its installed location” as recited in claim 12 of the ’336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
13[pre]. “A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:”	To the extent the preamble is limiting, Chen discloses the preamble of claim 13 of the ’336 Patent. For example, Chen discloses: “FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1c by user’s hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user’s hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space.” Chen at 22:61-23:15.  FIG. 10C

Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the LED light fixture of Chaimberg includes a switch 18. See Chaimberg at 3:49-60 (“As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15’ and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED’s or to replace the light transmitting lens 29 or for any repair.”); see *also id.* at 2:38-45 (“The cable has a predetermined length to permit the LED light fixture to be withdrawn from the fixture mounting hole a predetermined distance to provide access to a selector switch mounted in the cable to permit selective activation of either one of the at least two sets of LED’s or both sets of LED’s simultaneously to cause the LED light fixture to generate light at a selected desired correlated color temperature (CCT).”); Chaimberg at 4:30-5:10; Fig. 1.



	Thus, Chaimberg discloses “[a] switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire,” as recited in the preamble of claim 13 of the ’336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
13[a]. “a body;”	Chen discloses element 13[a] of claim 13 of the ’336 Patent. For example, Chen discloses: “FIG. 10C is another application of the present invention for a wall switch construction electrically connected to a ceiling light for the performance of three working modes. A motion of single swing across the detecting zone in front of the wall switch 1e by user’s hand within a preset time interval will activate the on/off switch control mode alternately turning on and turning off the ceiling light 2c. A motion of placing user’s hand in front of the wall switch 1c and stay in the detecting zone for a time period longer than a preset time interval will activate the dimming mode to allow the user to select the desired brightness. And a motion of double swings across the detecting zone within a preset time interval will activate the performance of the color temperature management mode to provide the user a convenient way to select a desired illumination color temperature. This new wall switch when compared with conventional switch represents a very user friendly innovation from the easy operation point of view. The conventional touch based wall switch is also a virus gathering spot because of use by many users and the issue of contagion and contamination is always a valid concern even outside the surgical space.” Chen at 22:61-23:15.

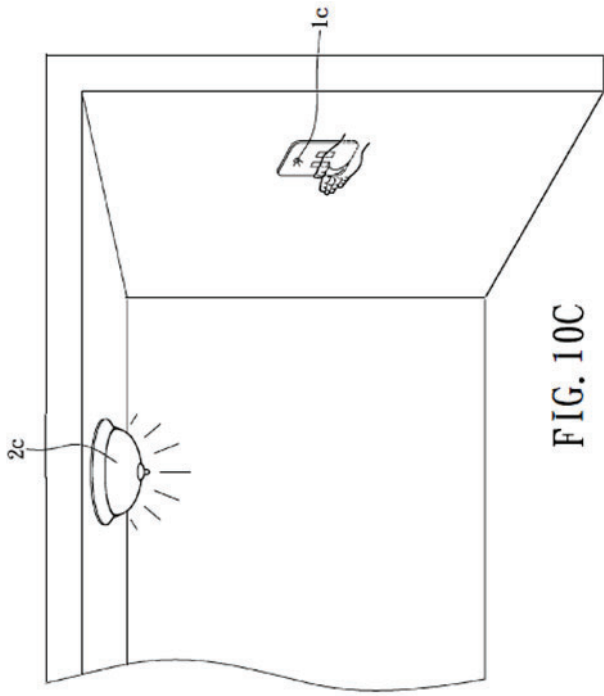
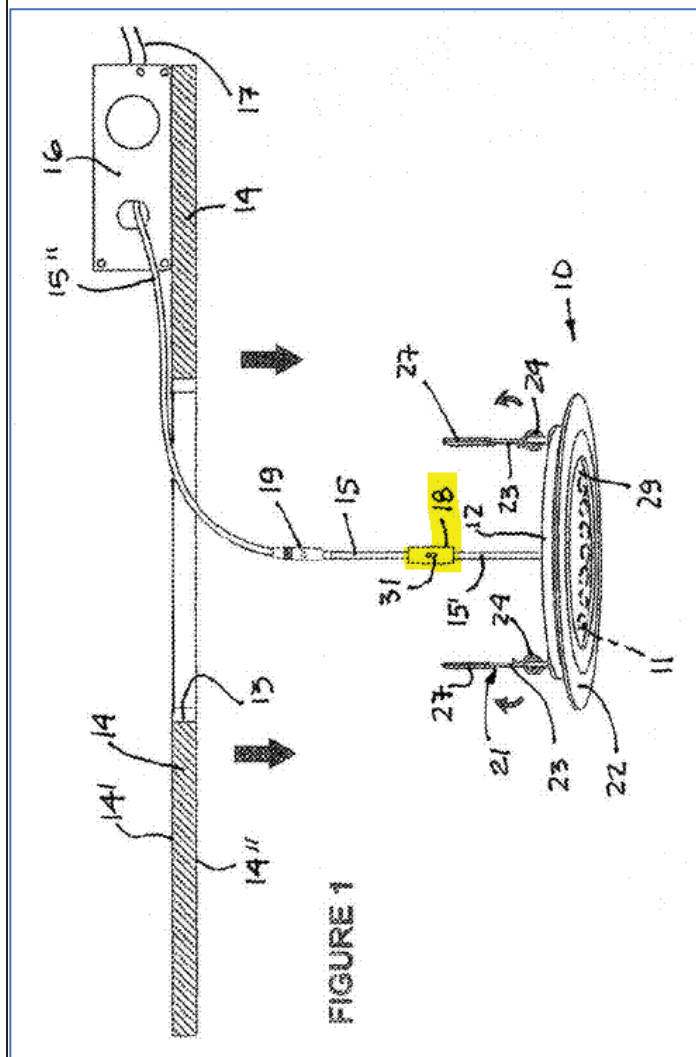


FIG. 10C

Chen at Fig. 10C.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” that includes a body. Chaimberg at 4:30-48; *see also id.* at 4:37-5:10; Fig. 1.



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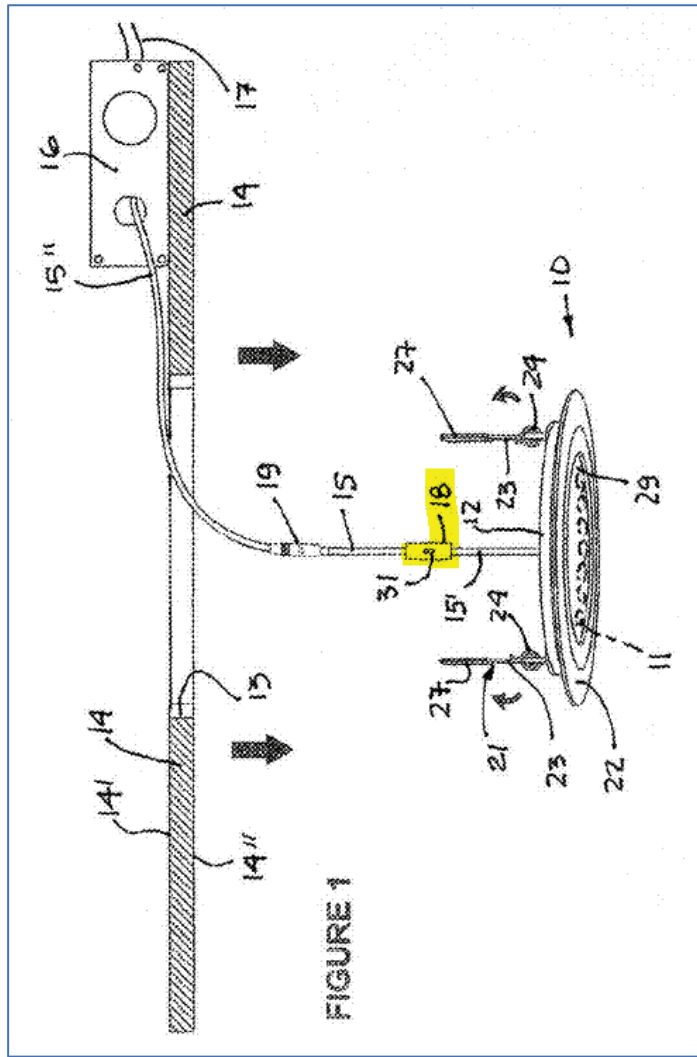
Thus, the switch 18 of Chaimberg includes “a body” as recited in element 13[a] of claim 13 of the ‘336 Patent.

Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

To the extent that Chen does not explicitly disclose this element, it would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch CCT selector switch 18 is mounted to the electrical cable 18. See Chaimberg at 3:49-60 (“As shown in FIG. 1, with the present invention the selector switch 18 is mounted on the cable 15 adjacent to the LED light fixture housing 12 and the cable is of suitable length to provide access to the switch 18 without having to withdraw the driver housing 16 from the fixture mounting hole 13. A connector 19 is herein shown secured to the cable 15 for disconnecting the cable lower end section 15’ and the switch from the driver housing 16 should replacement of the LED light fixture be necessary for all sorts of reasons, such as changing the fixture to one having different colored LED’s or to replace the light transmitting lens 29 or for any repair.”); see *also id.* at Fig. 1.

13[b]. “at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and”

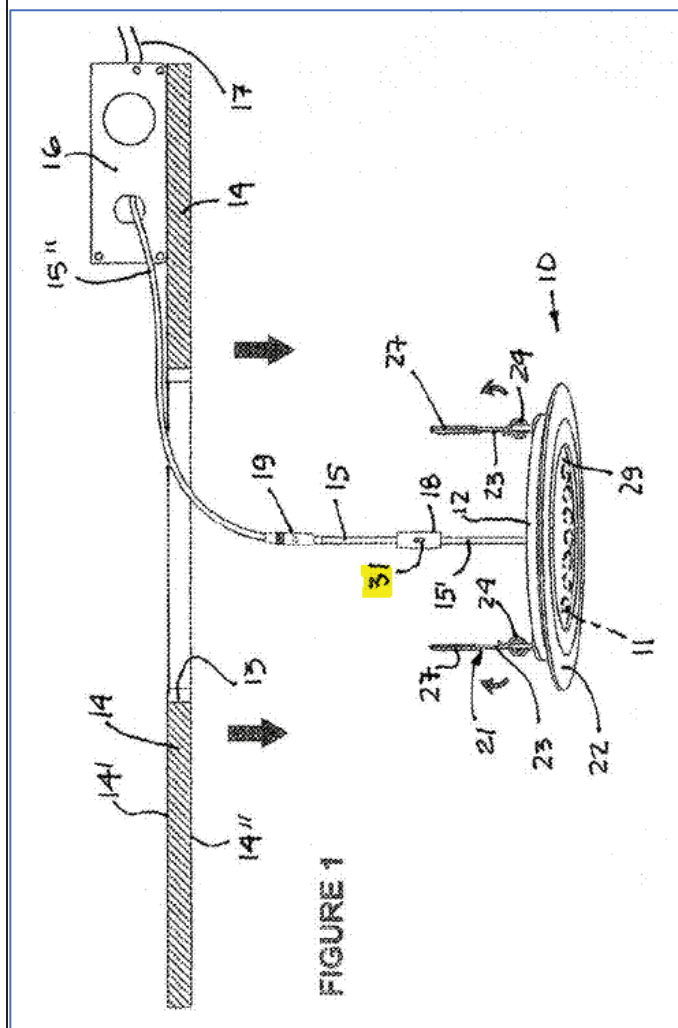


Thus, the switch 18 includes “at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire” as recited by element 13[b] of claim 13 of the ’336 Patent.

Accordingly, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

It would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg. For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-63.

13[c]. “an actuator disposed on the body, wherein the actuator has a range of positions,”



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Thus, Chaimberg discloses a CCT switch with “an actuator disposed on the body, wherein the actuator has a range of positions,” as recited in element 13[c] of claim 13 of the ’336 Patent.

Accordingly, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.

It would have been obvious for one of ordinary skill in the art, for example by modifying this reference to include these portions in view of the secondary references below, including Chaimberg.

For example, the switch 18 of Chaimberg “is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions,” each of these positions corresponds to a different CCT output by the LED light fixture of Chaimberg. Chaimberg at 4:30-48.

See also Chaimberg at 4:37-5:10 (“At a first position, the contacts 8 and 7, as well as contacts 1 and 2, are bridged by conductor arms 32 and 33, respectively. At this position the driver current at contact 1 is bridged to contact 2 to which the anode 34 of the driver diode 35 is connected through conductor 36. The current at contact 1 has been reduced by resistance 37 to a value to enable the diode 35 to conduct. The resistance 37 is provided to lower the input current at terminal 38 to prevent a high current impact on the leads of the 3000 Kelvin LED's 30, which could burn the LED's. When the diode 35 conducts, the driver

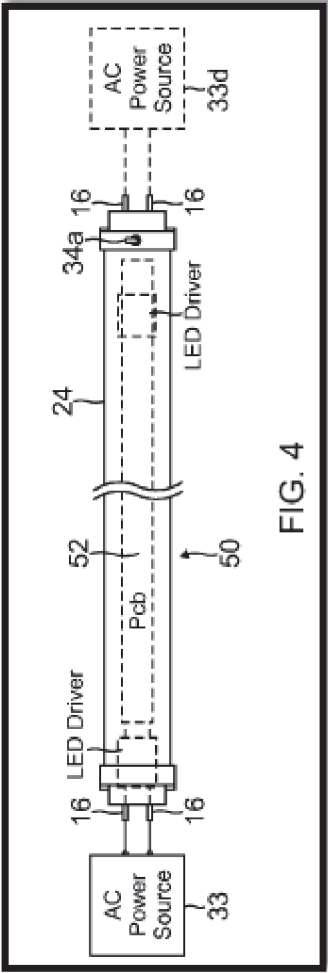
	Thus, Chaimberg discloses a CCT switch “wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire” as recited by element 13[d] of claim 13 of the ’336 Patent. Accordingly, Chen alone discloses this limitation or, in the alternative, Chen in combination with the knowledge of a POSITA, or in combination with other prior art references, renders this limitation obvious.
15. “The switch of claim 13, wherein each position is discrete within the range of positions.”	Chen discloses claim 15 for the reasons discussed above with respect to claim 3. Chen in view of Chaimberg further discloses this claim. <i>See</i> claim 3 above.
16. “The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position.”	Chen alone, or in the knowledge of a POSITA, and/or in view of the other cited prior art references, including but not limited to Chaimberg, renders obvious claim 16 for the reasons discussed above with respect to claim 4. <i>See</i> claim 4 above.
19. “The switch of claim 13, wherein the body is configured to be disposed within a junction box.”	Chen alone, or in the knowledge of a POSITA, and/or in view of the other cited prior art references, including but not limited to Chaimberg, renders obvious claim 19 for the reasons discussed above with respect to claim 7. <i>See</i> claim 7 above.

U.S. Patent No. 9,719,642 (“Macias”) and Additional References re ’336 Patent

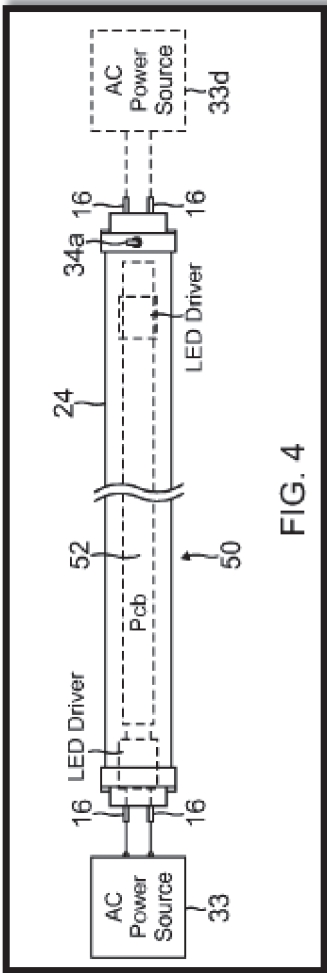
Primary Reference: U.S. Patent No. 9,719,642 (“Macias”).

Secondary Reference(s): U.S. Patent No. 9,801,250 (“Halliwell”); U.S. Patent No. 10,234,091 (“Chaimberg”); U.S. Patent No. 7,178,941 (“Roberge”); 7,192,160 (“Reiff”).

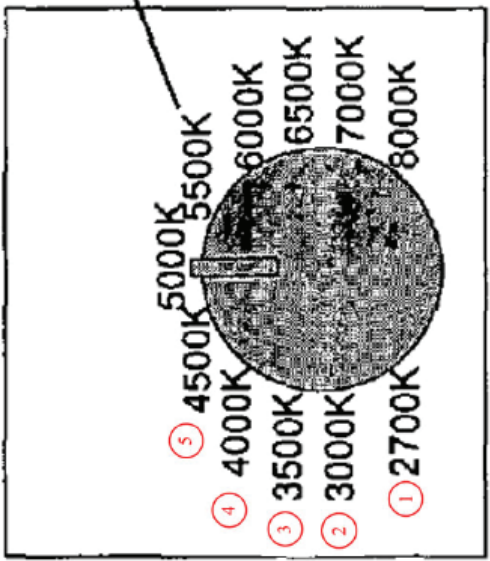
’336 Claim/Element	U.S. Patent No. 9,719,642 (“Macias”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Macias discloses the preamble of claim 1 of the ’336 Patent. For example, Macias discloses “[t]here is a support structure 10 configured to receive and retain a plurality of LEDs 12 in a uniform and consistent position. The support structure 10 is preferably an elongated and narrow surface shaped to insert into a tubular transparent or diffuser shade such that the lamp construction is compatible with existing fixtures for traditional fluorescent lamp tubes.” Macias at 5:16-22. Thus, Macias discloses a luminaire as recited in the preamble of claim 1 of the ’336 Patent.
1[a]. “a housing comprising at least one outer surface that forms a first cavity;”	Macias discloses element 1[a] of claim 1 of the ’336 Patent. For example, Macias discloses “[t]here is a support structure 10 configured to receive and retain a plurality of LEDs 12 in a uniform and consistent position. The support structure 10 is preferably an elongated and narrow surface shaped to insert into a tubular transparent or diffuser shade such that the lamp construction is compatible with existing fixtures for traditional fluorescent lamp tubes.” Macias at 5:16-22. Further, Macias discloses a “clear or semi-transparent or translucent diffuser shade tube 24 is also visible which acts to diffuse the light produced by the LEDs of the LED lamp. In the preferred embodiment, tube 24 is configured and sized with the same diameter as a traditional fluorescent tube lamp. Such as a size T8 or T12. There may be various embodiments with varying tube diameters configured with the same diameter and dimensions of various other traditional fluorescent lamp S17S.” Macias at 6:26-34. Thus, Macias discloses element 1[a] of the ’336 Patent.
1[b]. “at least one electrical component disposed, at least in part, within the first cavity;”	Macias discloses element 1[b] of claim 1 of the ’336 Patent.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB)." Macias at 6:37-44.  FIG. 4 Macias at Fig. 4. Thus, Macias discloses element 1[b] of the '336 Patent.
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	Macias discloses element 1[c] of claim 1 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	FIG. 2A Macias at Fig. 2a. Further, "Each of the LED lamps are connected to control unit 110 via cables. The cables may be standard cables and wiring widely used in the lighting and commercial production industry." '336 Patent at 39-42. Thus, Macias discloses element 1[c] of the '336 Patent.
1[d]. "a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,"	Macias discloses element 1[d] of claim 1 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. Thus, Macias discloses element 1[d] of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	Macias discloses element 1[e] of claim 1 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. Further, "the lighting provided by the LED lamps are selectively daylight white, with a color temperature between the range of 5400 to 5600 K, and tungsten or warm white with a color temperature range of 3000 to 3300K, using control unit (or units) 110, which may be the same as shown in FIGS. 5 and 6. Other temperature ranges as disclosed herein may be used." Macias at 9:31-38. Thus, Macias discloses element 1[e] of the '336 Patent.
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Macias discloses claim 3 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47.  FIG. 4

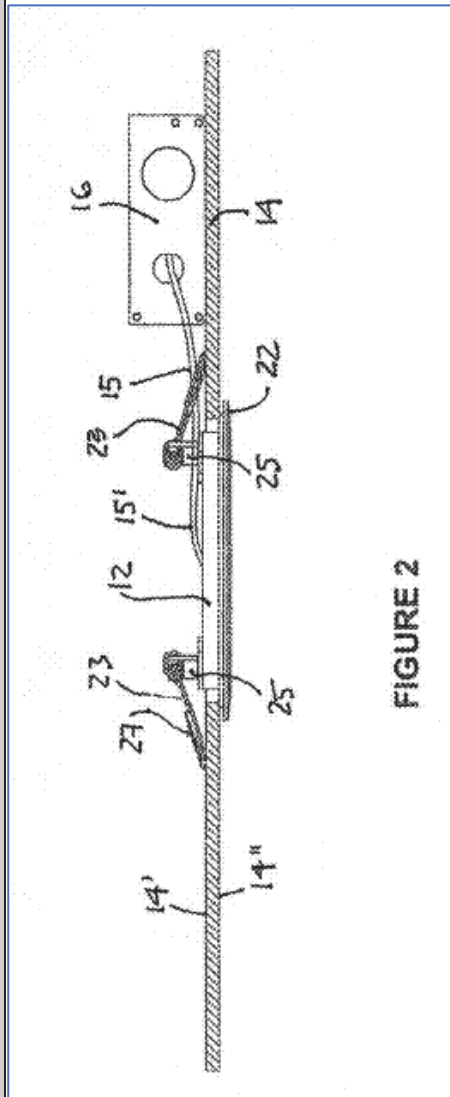
'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	Macias at Fig. 4. Thus, Macias discloses claim 3 of the '336 Patent.
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Macias alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. Thus, Macias discloses claim 4 of the '336 Patent. To the extent that Macias does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, Roberge discloses a switch with five positions. Fig. 34i shows "a dial [switch that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light" Roberge at 42:51-54, Fig. 34i.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K	 Fig. 34i Roberge at Fig. 34i (annotated). Further, "[t]he lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:54-57. Fig 34i shows a switch that includes 11 positions, including a first, second, third, fourth, and fifth position. While Fig. 34i shows a "dial" switch, Roberge discloses that "[a] slide mechanism can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. Accordingly, Macias alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K	Macias alone, or in combination with other prior art references renders obvious claim 5 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources.”	Further, “the lighting provided by the LED lamps are selectively daylight white, with a color temperature between the range of 5400 to 5600 K, and tungsten or warm white with a color temperature range of 3000 to 3300K, using control unit (or units) 110, which may be the same as shown in FIGS. 5 and 6. Other temperature ranges as disclosed herein may be used.” Macias at 9:31-38. Thus, Macias discloses claim 5 of the '336 Patent. To the extent that Macias does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, the switch of Fig. 34i of Roberge includes 11 positions, including first (2700K), second (3000K), third (3500K), fourth (4000K), fifth (4500K), and sixth positions (5000K): Fig. 34i Roberge at Fig. 34i (annotated). Roberge discloses that the eleven temperatures are exemplary. Roberge at 42:51-65.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	Accordingly, Macias alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Macias alone, or in combination with other prior art references renders obvious claim 7 of the '336 Patent. For example, Macias discloses "[t]here is a support structure 10 configured to receive and retain a plurality of LEDs 12 in a uniform and consistent position. The support structure 10 is preferably an elongated and narrow surface shaped to insert into a tubular transparent or diffuser shade such that the lamp construction is compatible with existing fixtures for traditional fluorescent lamp tubes." Macias at 5:16-22. Further, "[i]n an alternate embodiment as shown in FIG. 4, the LED lamp may include two sets of connectors 16, one set on each end of the LED lamp. One set of connectors may be electrically connected to provide power to one grouping of LED bulbs, and another to provide power to the other grouping." Macias at 7:24-29. Thus, Macias discloses claim 7 of the '336 Patent.
9. "The luminaire of claim 1, wherein the switch is a slide switch."	Macias alone, or in combination with other prior art references renders obvious claim 9 of the '336 Patent. Although Macias does not disclose a slide switch, however Reiff does disclose such a slide switch: "Located along electrical cord 56 extending from end cap 22 is control box 64 which is provided with switch 66 for operating fluorescent lamp 30 and LEDs 32. Switch 66 has three positions, one position being the off position as shown in FIG. 2, one position operating the fluorescent lamp and one position operating the LEDs. Switch 66 slides into one of the three positions and is rotatable to control the intensity of the light source. Light 108 is illustrated as being provided with switch 66; however, any suitable type of switch may be used to operate the light. The number of LEDs 32 mounted to circuitboard 110 further defines the maximum intensity of the light emitted therefrom such that the more LEDs provided, the greater the maximum intensity." '160 Patent at 6:18-30. A POSA would have been motivated to combine these references. Thus, Macias in combination with Reiff discloses claim 9 of the '336 Patent.
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	Macias discloses claim 11 of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	For example, Macias discloses "simpler way is to have a switch, manual or remote control such as switch 34 or 34a of FIG. 3 that toggles between powering the D bulbs and the T bulbs." Macias at 8:22-24. Figure 3 shows the switch 34 within a housing 24 that is inaccessible. FIG. 3 Macias at Fig. 3. Thus, Macias discloses claim 11 of the '336 Patent. To the extent that Macias does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell. For example, the switch 18 is inaccessible when housing is installed. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); <i>see also id.</i> at Fig. 2.



Further, the LED fixture is “adapted to be removably secured in a housing mounting hole in a ceiling sheeting material,” the “selector switch 18 is mounted [in/on the cable 15” (Chaimberg at Abstract, 3:49-54), and the selector switch 18 “is made accessible and visible by simply withdrawing the light fixture from” the ceiling. *Id.*, Abstract. When the light fixture is “retracted from its fixture mounting hole,” the switch 18 is below the ceiling 14 and accessible to the user. *Id.*, 3:13-15, Fig. 1. Fig. 2 shows the light fixture “mounted in the fixture mounting hole.” *Id.*, 2:58-61, Fig. 2. The cable 15 (where the switch 18 is mounted) is on the inner side of the “ceiling sheeting material 14” and inaccessible when the LED light fixture is installed. *Id.*, 4:16-29, Fig. 2.

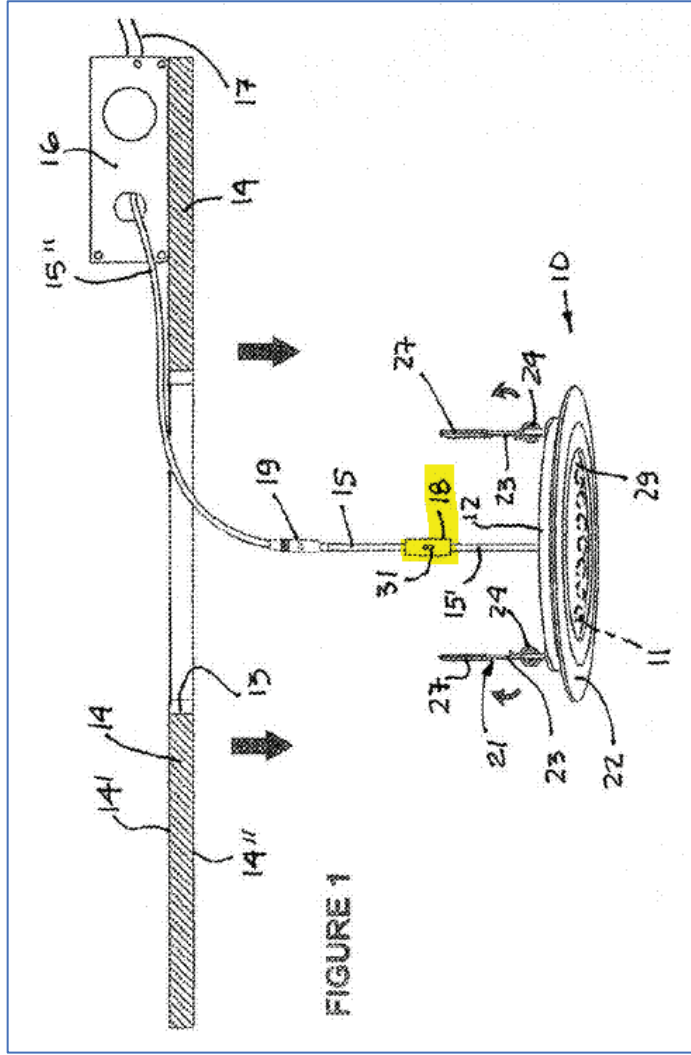
Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19.

Further, Halliwell discloses “the switch disposed within the second cavity” of the junction box. Halliwell discloses that “the remote switch 40 may be a . . . junction box mounted toggle switch . . . in wired communication with the switch control unit 35.” Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (*see* Halliwell at 7:8-19), and a POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements.

Further, a POSA would have understood that because the CCT switch is mounted in the junction box, it is inaccessible to the user when the LED housing is installed in the ceiling. Moreover, Halliwell discloses that “a user may select a desired operating light aspects or qualities (e.g., color temperature...) for the ...

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
	LED lighting device before the ... LED lighting device is installed" in a ceiling, confirming that the switch will be inaccessible after the LED lighting device is installed. Halliwell at 4:31-35. Accordingly, Macias alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."	Macias discloses claim 12 of the '336 Patent. For example, Macias discloses "simpler way is to have a switch, manual or remote control such as switch 34 or 34a of FIG. 3 that toggles between powering the D bulbs and the T bulbs." Macias at 8:22-24. Figure 3 shows the switch 34 within a housing 24 that is accessible when the housing is removed. FIG. 3 Macias at Fig. 3. Thus, Macias discloses claim 12 of the '336 Patent. To the extent that Macias does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell. For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); <i>see also id.</i> at 1:8-15 ("The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED's of different correlated color temperature (CCT) and

wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole."); Fig. 1.



Further, the CCT switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is "accessible and visible" to the user when the housing is removed from its installed location (*id.*, Abstract, 4:16-29). Fig. 1.

Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19.

Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (*see* Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	Accordingly, Macias alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent. To the extent the preamble is limiting, Macias discloses the preamble of claim 13 of the '336 Patent. For example, Macias discloses "The LED lamp 8 may include the power input switch 34 configured to selectively provide power to either the grouping of D LEDs or the grouping of T LEDs. Preferably, the grouping of LEDs to be powered at a given time by the power source may be selected by the user. Also preferably, each lamp or bulb 8 may have arrayed LEDs on each side of support 10 (or 20, 30 or 40)." Further, Macias discloses a "clear or semi-translucent or translucent diffuser shade tube 24 is also visible which acts to diffuse the light produced by the LEDs of the LED lamp. In the preferred embodiment, tube 24 is configured and sized with the same diameter as a traditional fluorescent tube lamp. Such as a size T8 or T12. There may be various embodiments with varying tube diameters configured with the same diameter and dimensions of various other traditional fluorescent lamp S17S." Macias at 6:26-34. Thus, Macias discloses the preamble of claim 13 of the '336 Patent.
13[a]. "a body;"	Macias discloses element 13[a] of claim 13 of the '336 Patent. For example, Macias discloses "The LED lamp 8 may include the power input switch 34 configured to selectively provide power to either the grouping of D LEDs or the grouping of T LEDs. Preferably, the grouping of LEDs to be powered at a given time by the power source may be selected by the user. Also preferably, each lamp or bulb 8 may have arrayed LEDs on each side of support 10 (or 20, 30 or 40)." Further, Macias discloses a "clear or semi-translucent or translucent diffuser shade tube 24 is also visible which acts to diffuse the light produced by the LEDs of the LED lamp. In the preferred embodiment, tube 24 is configured and sized with the same diameter as a traditional fluorescent tube lamp. Such as a size T8 or T12. There may be various embodiments with varying tube diameters configured with the same diameter and dimensions of various other traditional fluorescent lamp sizes." Macias at 6:26-34. Thus, Macias discloses element 13[a] of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"	Macias discloses element 13[b] of claim 13 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. FIG. 2A Macias at Fig. 2a. Further, "Each of the LED lamps are connected to control unit 110 via cables. The cables may be standard cables and wiring widely used in the lighting and commercial production industry." '336 Patent at 39-42. Thus, Macias discloses element 13[b] of the '336 Patent.

'336 Claim/Element	U.S. Patent No. 9,719,642 ("Macias") Alone And/Or in View of The Secondary References Identified Above
13[c]. "an actuator disposed on the body, wherein the actuator has a range of positions,"	Macias discloses element 13[c] of claim 13 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. Thus, Macias discloses element 13[c] of the '336 Patent.
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	Macias discloses element 13[d] of claim 13 of the '336 Patent. For example, Macias discloses "[s]witching mechanism 134 shows various options for Switch 34. It may be a manual switch such as manual switch 34a (see FIG. 4) or it may be a remote controlled switch having an RFID (radio frequency identification detector) 135 or infrared (IR) to receive remote controls to cause actual Switch connector 134a to toggle between allowing current to drive the T LEDs or the D LEDs on circuit board 52 (PCB). Signals could also travel along the electrical connectors 16 by means of modulating an initial portion of the electrical power carried to connectors 16 (from, e.g., a control unit as in FIGS. 5 and 6)." Macias at 6:37-47. Further, "the lighting provided by the LED lamps are selectively daylight white, with a color temperature between the range of 5400 to 5600 K, and tungsten or warm white with a color temperature range of 3000 to 3300K, using control unit (or units) 110, which may be the same as shown in FIGS. 5 and 6. Other temperature ranges as disclosed herein may be used." Macias at 9:31-38. Thus, Macias discloses element 13[d] of the '336 Patent.
15. "The switch of claim 13, wherein each position is discrete within the range of positions."	Macias discloses claim 15 for the reasons discussed above with respect to claim 3. See claim 3 above.
16. "The switch of claim 15, wherein the range of positions comprises a first position, a second position, a	Macias alone, and/or in view of the other cited prior art references renders obvious claim 16 for the reasons discussed above with respect to claim 4. See claim 4 above.

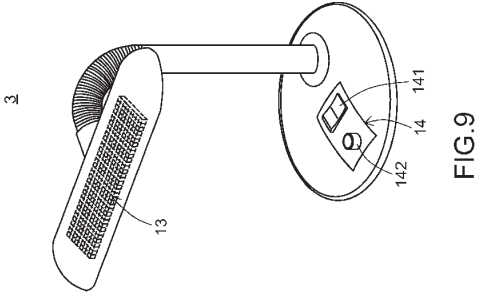
'336 Claim/Element third position, a fourth position, and a fifth position.”	U.S. Patent No. 9,719,642 (“Macias”) Alone And/Or in View of The Secondary References Identified Above To the extent that Macias does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Roberge. For example, Roberge discloses a switch with five positions. Fig. 34i shows “a dial [switch that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light” Roberge at 42:51-54, Fig. 34i. Fig. 34i Roberge at Fig. 34i (annotated). Further, “[t]he lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial.” Roberge at 42:54-57. Fig. 34i shows a switch that includes 11 positions, including a first, second, third, fourth, and fifth position. While Fig. 34i shows a “dial” switch, Roberge discloses that “[a] slide mechanism can be used like the dial to set a particular color temperature of white light.” Roberge at 42:57-59. Accordingly, Macias alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the ’336 Patent.
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'336 Claim/Element	U.S. Patent No. 9,719,642 (“Macias”) Alone And/Or in View of The Secondary References Identified Above
19. “The switch of claim 13, wherein the body is configured to be disposed within a junction box.”	Macias alone, and/or in view of the other cited prior art references renders obvious claim 19 for the reasons discussed above with respect to claim 7. See claim 7 above.

U.S. Patent No. 8,729,812 (“Kuwu”) and Additional References re ’336 Patent

Primary Reference: U.S. Patent No. 8,729,812 (“Kuwu”)

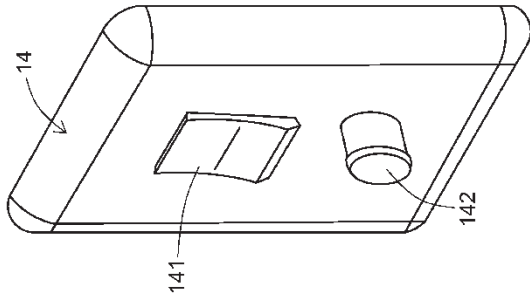
Secondary Reference(s): U.S. Patent No. 7,014,336 (“Ducharme”), U.S. Patent No. 10,091,855 (“Van Winkle”), U.S. Patent No. 9,801,250 (“Halliwell”), U.S. Patent No. 7,178,941 (“Roberge”).

'336 Claim/Element	U.S. Patent No. 8,729,812 (“Kuwu”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Kuwu discloses a luminaire. <i>See e.g., Kuwu at Abstract:</i> “A lighting device includes a lighting part, a Switching part and a luminance fine-tuning part.”
1[a]. “a housing comprising at least one outer surface that forms a first cavity,”	Kuwu discloses a housing comprising at least one outer surface that forms a first cavity. <i>See e.g., Kuwu at Fig. 9:</i>  FIG. 9
1[b]. “at least one electrical component disposed, at least in part, within the first cavity;”	Kuwu discloses at least one electrical component disposed, at least in part, within the first cavity. <i>See e.g., Kuwu at Fig. 9:</i>

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	FIG.9 <i>See e.g., Kuwu at 6:14-17:</i> “Moreover, the switching element 11 is coupled with a power source 2, and the driving device 12 is electrically connected between the switching element 11 and the light source 13.”
1[c]. “an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and”	Kuwu discloses an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component. <i>See e.g., Kuwu at 1:63-66:</i> “The Switching element is coupled with a power Source. The driving device is electrically connected between the switching element and the light source.”

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	See <i>e.g.</i>, Kuwu at 3:52-53: "The Switching part is coupled with a power Source and electrically connected with the lighting part." See <i>e.g.</i>, Kuwu at 6:14-17: "Moreover, the switching element 11 is coupled with a power source 2, and the driving device 12 is electrically connected between the switching element 11 and the light source 13." See <i>e.g.</i>, Kuwu at Fig. 1: <pre> graph LR 2[2: power source] --- 11[11: switching element] 11 --- 12[12: driving device] 12 --- 13[13: light source] subgraph 13 [light source] 131[131: 1st LED unit] 132[132: 2nd LED unit] end </pre> FIG.1 To the extent that this limitation is not disclosed by Kuwu, it would have been obvious to one of ordinary skill in the art to use an electrical cable to connect the elements described above.

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
1[d]. "a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,"	Kuwu discloses a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing. <i>See e.g.</i>, Kuwu at 6:4-24: "The lighting device 1 comprises a Switching element 11, a driving device 12 and a light source 13. The light source 13 comprises at least a first LED unit 131 and at least a second LED unit 132. The first LED unit 131 is configured for outputting light with a first color temperature, and the second LED unit 132 is configured for outputting light with a second color temperature. In the first embodiment, the light with the first color temperature is cold white light with a color temperature of 6000K, and the light with the second color temperature is warm white light with a color temperature of 3000K. Moreover, the switching element 11 is coupled with a power source 2, and the driving device 12 is electrically connected between the switching element 11 and the light source 13. In a case that the switching element 11 is turned on, the electricity provided by the power source 2 will allow the driving device 12 to drive illumination of the first LED unit 131 and/or the Second LED unit 132. Whereas, in a case that the switching element 11 is turned off, the power source 2 fails to provide electricity to the driving device 12, and thus the first LED unit 131 and the second LED unit 132 go off." <i>See e.g.</i>, Kuwu at 10:47-50: "As shown in FIG. 8, the operating interface 14 comprises a Switching part 141 and a luminance fine-tuning part 142. The Switching part 141 is for example a Switching element 11 that is installed on an indoor wall." <i>See e.g.</i>, Kuwu at Fig. 8:

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire."	 FIG. 8 Kuwu discloses wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire. <i>See e.g., Kuwu at 10:59-63:</i> "Moreover, the user may rotate the luminance fine-tuning part 142 of the operating interface 14 to change the resistance value of the variable resistor Rs, thereby fine-tuning the selected luminance. That is, by rotating the luminance fine tuning part 142, the selected luminance is slightly increased or decreased, and thus the most satisfactory luminance level can be achieved." <i>See e.g., Kuwu at Fig. 8:</i>

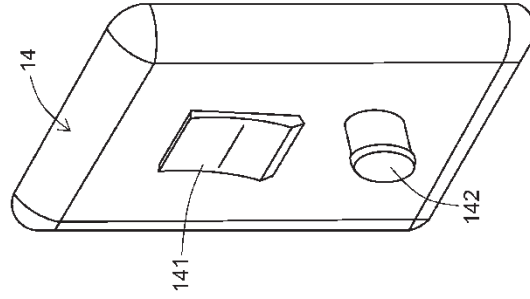


FIG. 8

To the extent that Kuwu does not explicitly disclose one or more portions of this claim element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below.

See e.g., Ducharme at 4:54-64:

“In another embodiment, the lighting fixture can comprise a plurality of LEDs producing three spectrums of electromagnetic radiation with maximum spectral peaks outside the region of 530 nm, to 570 nm (such as 450 nm and/or 592 nm) where the additive interference of the spectrums results in white light. The lighting fixture may produce white light within a range of color temperatures such as, but not limited to, the range 500K to 10,000K and the range 2300 K to 4500 K. The lighting fixture may include a controller and/or a processor for controlling the intensities of the LEDs to produce various color temperatures in the range.”

See e.g., Ducharme at 5:13-28:

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	"Another embodiment comprises a lighting fixture for generating white light including a plurality of component illumination sources (such as LEDs, illumination devices containing a phosphor, or LEDs containing a phosphor), including component illumination sources producing spectrums of electromagnetic radiation. The component illumination source being mounted on a mounting designed to allow the spectrums to mix and form a resulting spectrum, wherein the resulting spectrum has intensity greater than background noise at its lowest valley. The lowest spectral valley within the visible range can also have an intensity of at least 5%, 10%, 25%, 50%, or 75% of the intensity of its maximum spectral peak. The lighting fixture may be able to generate white light at a range of color temperatures and may include a controller and/or processor for enabling the selection of a particular color in that range." <i>See e.g., Roberge at 42:51-65:</i> "Referring to FIG. 34i, in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial. A slide mechanism can be used like the dial to set a particular color temperature of white light, or to select a particular color of non-white light, in either case on a scale. Again, the designer can specify a particular setting, and the installer can set it according to the design plan. Providing adjustable lighting units 102 offers designers and installers much greater control over the correct maintenance of the lighting of the environment." To the extent that Kuwu does not disclose discrete correlated color temperature output, it would have been obvious to one of ordinary skill in the art to combine Kuwu with Roberge and/or Ducharme. Kuwu discloses wherein each position of the plurality of positions is discrete. <i>See e.g., Kuwu at 10:59-63:</i> "Moreover, the user may rotate the luminance fine-tuning part 142 of the operating interface 14 to change the resistance value of the variable resistor Rs, thereby fine-tuning the selected luminance. That is, by rotating the luminance fine tuning part 142, the selected luminance is slightly increased or decreased, and thus the most satisfactory luminance level can be achieved." <i>See e.g., Kuwu at Fig. 8:</i>
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	FIG. 8 To the extent that Kuwu does not disclose the element, it would have been obvious to one of ordinary skill in the art in view of Roberge and/or Ducharme. <i>See</i> claim element 1[e] (discussing Roberge and Ducharme). Kuwu discloses wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position. <i>See e.g.</i>, Kuwu at 10:59-63: "Moreover, the user may rotate the luminance fine-tuning part 142 of the operating interface 14 to change the resistance value of the variable resistor Rs, thereby fine-tuning the selected luminance. That is, by rotating the luminance fine tuning part 142, the selected luminance is slightly increased or decreased, and thus the most satisfactory luminance level can be achieved." <i>See e.g.</i>, Kuwu at Fig. 8:
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Kuwu discloses wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position. <i>See e.g.</i>, Kuwu at 10:59-63: "Moreover, the user may rotate the luminance fine-tuning part 142 of the operating interface 14 to change the resistance value of the variable resistor Rs, thereby fine-tuning the selected luminance. That is, by rotating the luminance fine tuning part 142, the selected luminance is slightly increased or decreased, and thus the most satisfactory luminance level can be achieved." <i>See e.g.</i>, Kuwu at Fig. 8:

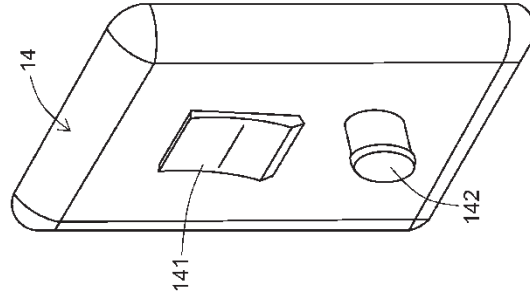


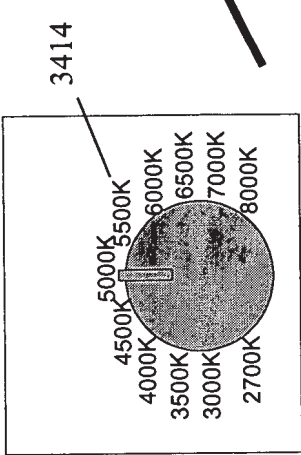
FIG. 8

To the extent that Kuwu does not disclose five positions, it would have been obvious to one of ordinary skill in the art to include 5 positions, for instance by modifying this reference to include these portions in view of the secondary references below.

For example, Ducharme and/or Roberge discloses multiple positions.

See *e.g.*, Ducharme at 4:54-64:

“In another embodiment, the lighting fixture can comprise a plurality of LEDs producing three spectrums of electromagnetic radiation with maximum spectral peaks outside the region of 530 nm, to 570 nm (such as 450 nm and/or 592 nm) where the additive interference of the spectrums results in white light. The lighting fixture may produce white light within a range of color temperatures such as, but not limited to, the range 500K to 10,000K and the range 2300 K to 4500 K. The lighting fixture may include a controller and/or a processor for controlling the intensities of the LEDs to produce various color temperatures in the range.”

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	See <i>e.g.</i>, Ducharme at 5:13-28: "Another embodiment comprises a lighting fixture for generating white light including a plurality of component illumination sources (such as LEDs, illumination devices containing a phosphor, or LEDs containing a phosphor), including component illumination sources producing spectrums of electromagnetic radiation. The component illumination source being mounted on a mounting designed to allow the spectrums to mix and form a resulting spectrum, wherein the resulting spectrum has intensity greater than background noise at its lowest valley. The lowest spectral valley within the visible range can also have an intensity of at least 5%, 10%, 25%, 50%, or 75% of the intensity of its maximum spectral peak. The lighting fixture may be able to generate white light at a range of color temperatures and may include a controller and/or processor for enabling the selection of a particular color in that range." See <i>e.g.</i>, Roberge at 42:51-65: "Referring to FIG. 34i, in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial. A slide mechanism can be used like the dial to set a particular color temperature of white light, or to select a particular color of non-white light, in either case on a scale. Again, the designer can specify a particular setting, and the installer can set it according to the design plan. Providing adjustable lighting units 102 offers designers and installers much greater control over the correct maintenance of the lighting of the environment." See <i>e.g.</i>, Roberge at Fig. 34i:  FIG. 34i is a circular dial scale, labeled 3414, used for selecting color temperatures. The dial features a circular face with a scale of color temperatures marked around its perimeter. The markings, starting from the bottom and moving clockwise, are 2700K, 3000K, 3500K, 4000K, 4500K, 5000K, 5500K, 6000K, 6500K, 7000K, and 8000K. A small rectangular window is positioned at the top of the dial, and a pointer or indicator is visible at the 5000K mark. The entire dial is enclosed within a rectangular frame.

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	Kuwu discloses a switch corresponding to different color temperatures. <i>See e.g.</i>, Kuwu at 10:59-63: "Moreover, the user may rotate the luminance fine-tuning part 142 of the operating interface 14 to change the resistance value of the variable resistor Rs, thereby fine-tuning the selected luminance. That is, by rotating the luminance fine tuning part 142, the selected luminance is slightly increased or decreased, and thus the most satisfactory luminance level can be achieved." <i>See e.g.</i>, Kuwu at 3:54-59: "When the switching part is turned on for a specified number of times by a user, the first luminance with the first color temperature, the second luminance with the second color temperature or a third luminance with a combination of the first color temperature and the second color temperature is selectively outputted from the lighting part." <i>See e.g.</i>, Kuwu at Fig. 8:

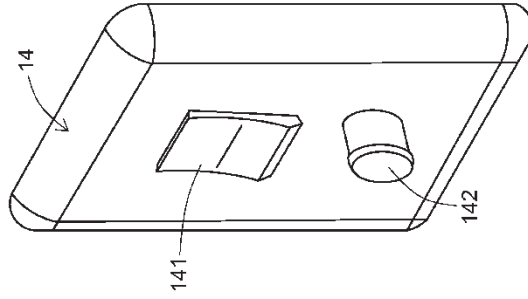


FIG. 8

To the extent that Kuwu does not disclose five positions, it would have been obvious to one of ordinary skill in the art to include 5 positions, for example by modifying this reference to include these portions in view of the secondary references below.

Further, Roberge discloses wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources.

See e.g., Roberge at 42:51-65:

“Referring to FIG. 34i, in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial. A slide mechanism can be used like the dial to set a particular color temperature of white light, or to select a particular color of non-white light, in either case on a scale. Again, the designer can specify a particular setting, and the installer can set it according to the design plan. Providing adjustable lighting units 102 offers designers and installers much greater control over the correct maintenance of the lighting of the environment.” <i>See e.g., Roberge at Fig. 34i:</i> Fig. 34i It would have been obvious one of ordinary skill in the art to include 5 switch positions corresponding to the abovementioned values in view of Roberge and/or Ducharme.
7. “The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch.”	Kuwu discloses a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch. <i>See e.g., Kuwu at Fig 9:</i>

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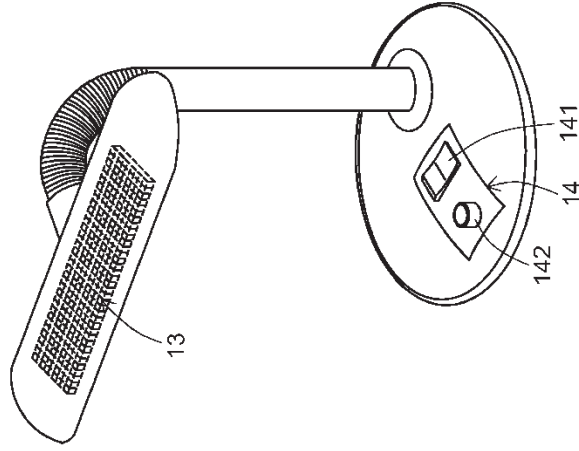


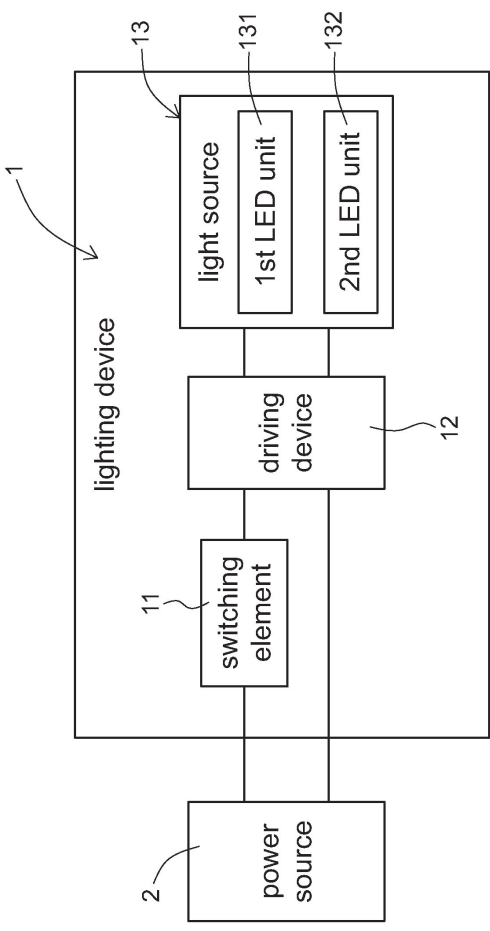
FIG.9

See e.g., Kuwu at 10:47-58:

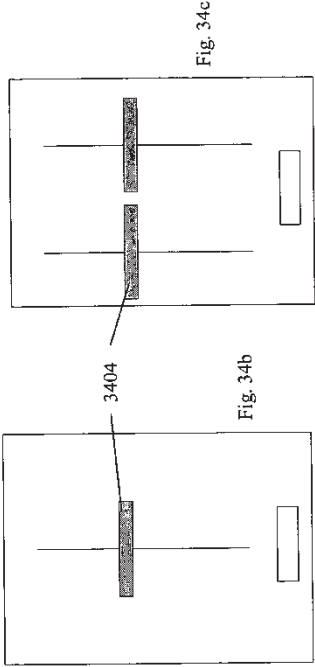
“As shown in FIG. 8, the operating interface 14 comprises a Switching part 141 and a luminance fine-tuning part 142. The Switching part 141 is for example a Switching element 11 that is installed on an indoor wall. Alternatively, as shown in FIG.9, the switching part 141 is an original switching element of a reading lamp 3. In addition, the luminance fine-tuning part 142 is a knob-type controlling element. By pressing the Switching part 141 to turn on the Switching element 11 and changing the number of times a Switching element is turned on, the light with desired color temperature and luminance is produced according to the user's requirements or the Surrounding requirements.”

See e.g., Kuwu at 1:63-66:

“The Switching element is coupled with a power Source. The driving device is electrically connected between the switching element and the light source.”

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	See e.g., Kuwu at 3:52-53: "The Switching part is coupled with a power Source and electrically connected with the lighting part." See e.g., Kuwu at 6:14-17: "Moreover, the switching element 11 is coupled with a power source 2, and the driving device 12 is electrically connected between the switching element 11 and the light source 13." See e.g., Kuwu at Fig. 1:  FIG.1 To the extent that Kuwu does not disclose an electrical cable, it would have been obvious to one of ordinary skill in the art to use an electrical cable to electrically connect.

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
9. "The luminaire of claim 1, wherein the switch is a slide switch."	To the extent that Kuwu does not explicitly disclose a slide switch, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below. <i>See e.g.</i>, Ducharme at 16:45-55: "In another embodiment, a manual control system (2036) is used in the system (2000), as depicted in FIG. 10a, such as a dial, Slider, Switch, multipole Switch, console, other lighting control unit, or any other controller or combination of controllers to permit a user to modify the illumination conditions until the illumination conditions or the appearance of a Subject being illuminated is desirable. For example, a dial or slider may be used in a System to modulate the net color spectrum produced, the illumination along the color temperature curve, or any other modulation of the color of the lighting fixture." <i>See e.g.</i>, Ducharme at 16:64-17:17: "One such manual control system (2036) is in detail in FIG. 10b. The depicted control unit features a dial marked to indicate a range of color temperatures, e.g., from 3000K to 10,500K. This device would be useful on a lighting fixture used to produce a range of temperatures ('colors') of white light, Such as the one discussed below. It would be understood by one of skill in the art that broader, narrower, or overlapping ranges may be employed, and a similar System could be employed to control lighting fixtures that can produce light of a spectrum beyond white, or not including white. A manual control system (2036) may be included as part of a processor controlling an array of lighting units, coupled to a processor, e.g., as a peripheral component of a lighting control System, disposed on a remote control capable of transmitting a signal, Such as an infrared or microwave signal, to a System controlling a lighting unit, or employed or configured in any other manner, as will readily be understood by one of skill in the art. Additionally, instead of a dial, a manual control System (2036) may employ a Slider, a mouse, or any other control or input device Suitable for use in the Systems and methods described herein." <i>See e.g.</i>, Roberge at 42:13-17: "FIG. 34b and FIG. 34c show user interfaces 4908 involving slides 3404 that can change the intensity or color, depending on the mode. A dual slide is shown in FIG. 34c, where one slide 3404 can adjust color and the other can adjust intensity, or the like." <i>See e.g.</i>, Roberge at Figs. 34b and 34c:

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	 Fig. 34b Fig. 34c To the extent that Kuwu does not explicitly disclose this element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below. <i>See e.g.</i>, Halliwell at 6:63-7:08: "For example, the switch 30 may be mounted on an exterior surface of the LED lighting device 20. For example, the switch 30 may be mounted on a back, bottom, or otherwise generally hidden surface of the device housing 24 such that the switch is not generally viewable by a user when the LED lighting device 20 is in operation. In some embodiments, the switch 30 may be accessible to the user when the LED lighting device is installed. In such embodiments, the switch 30 may still be generally hidden and/or not located where the switch 30 is easily viewable (e.g., the switch 30 is generally not located on the front of the LED lighting device 20)." <i>See e.g.</i>, Halliwell at Fig. 2:

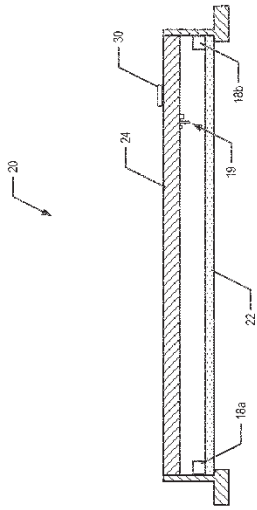


FIG. 2

See e.g., Halliwell at Figs. 2A-D:

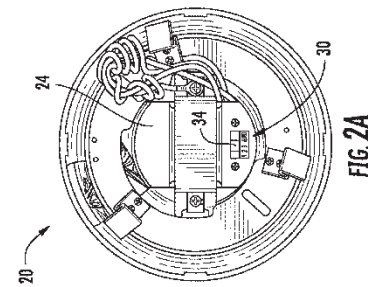


FIG. 2A

FIG. 2B

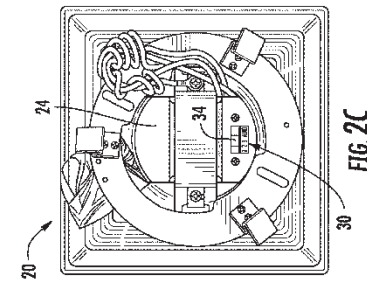


FIG. 2C

FIG. 2D

See e.g., Van Winkle at 10:40-54:

"Diffuser 154 is a concealment to render slide switch assembly 146 unobservable and inaccessible when it is connected to base 158, and renders slide switch assembly 146 observable and accessible once it is removed from base 158. Slide switch assembly 146 is attached to base 158 by means of a pair of screws 184 which extend through tabs extending from a housing 186 of switch assembly 145 as shown in FIGS. 29 and 31. Housing 180 also has a pair of tabs for which another set of screws 188 is used to attach housing 180 to base 158. Although not shown, a set of electrical leads are disposed on a side 190 opposite to the side of base 158 shown in FIGS. 29 and 31. These leads would be operatively connected to the appropriate circuitry in the ceiling to which fixture 152 is to be electrically connected."

See e.g., Van Winkle at Fig. 26-28:

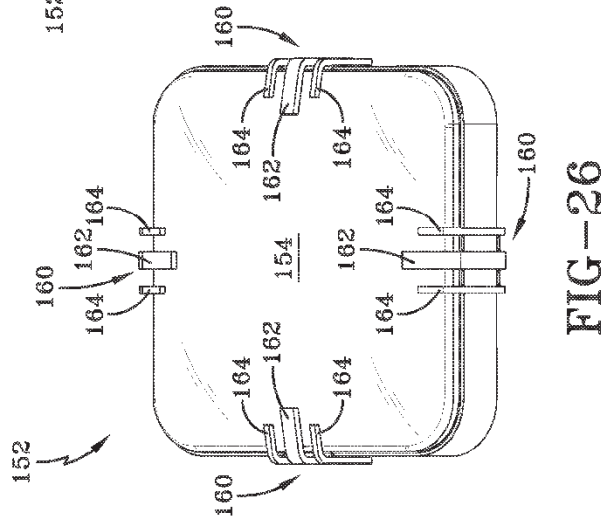


FIG-26

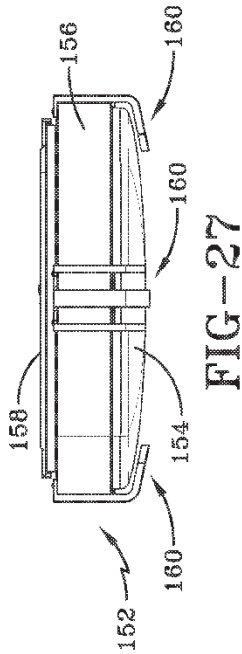


FIG-27

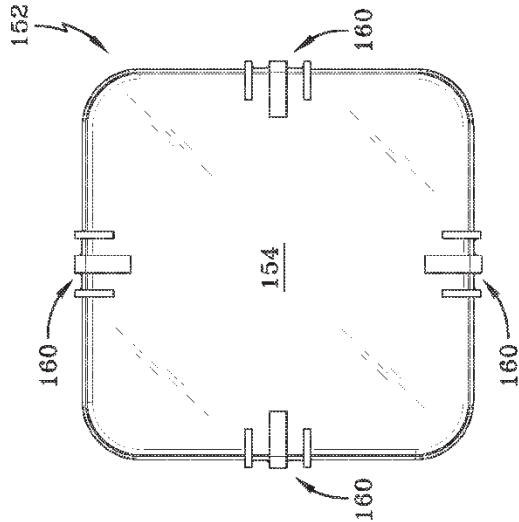
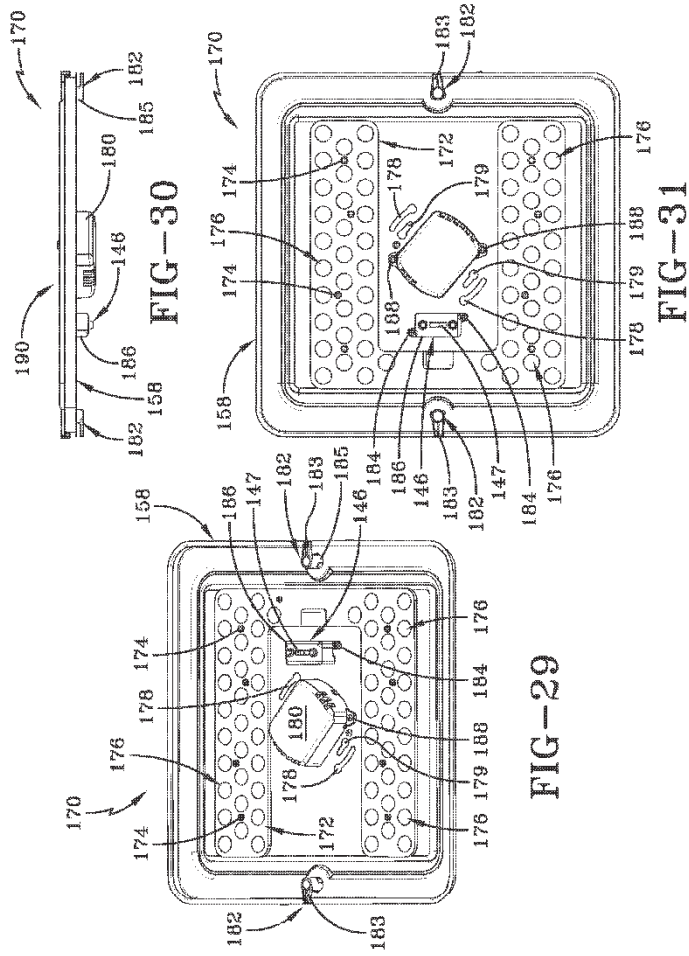


FIG-28

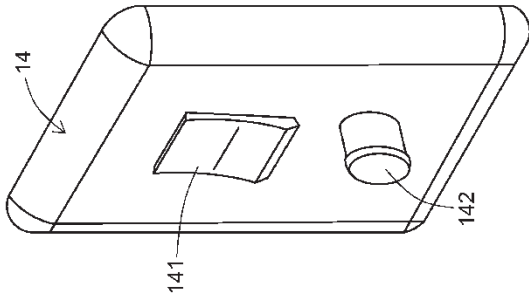
See e.g., Van Winkle at Fig. 29-31:

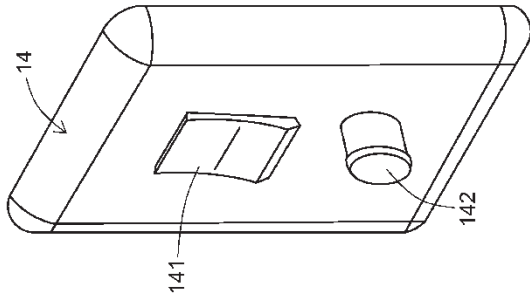


12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."

Kuwu discloses a switch that is accessible, thereby the switch would be accessible when the housing is removed from its installed location.

See e.g., Kuwu at Fig. 8:

'336 Claim/Element	 FIG. 8
	To the extent that Kuwu does not disclose this element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify this reference to include these portions in view of the secondary references below, such as Van Winkle. See claim element 11.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	See claims 1[d] and 1[e].
13[a]. "a body;"	Kuwu discloses a body. See e.g., Kuwu at Fig. 8:

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 8 <i>See e.g., Kuwu at Fig. 9:</i>

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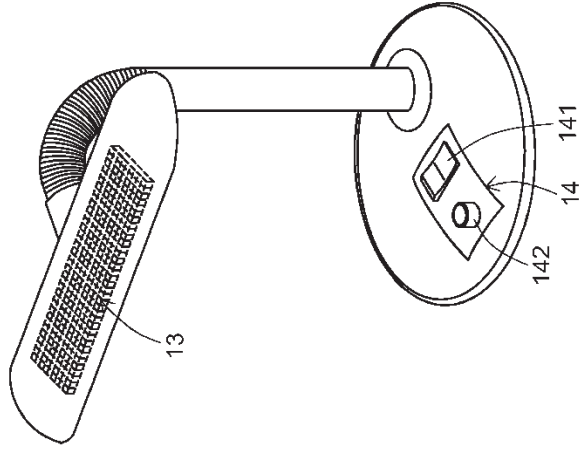
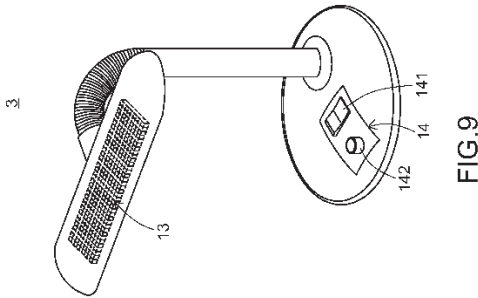


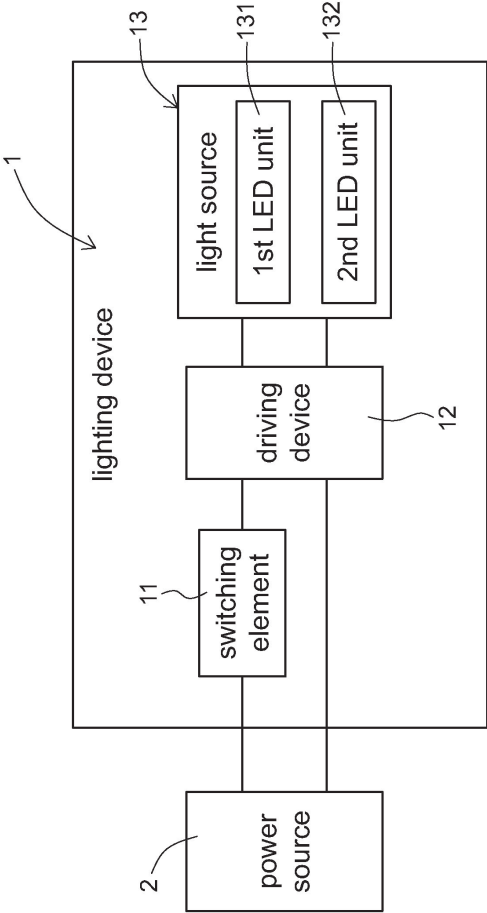
FIG. 9

13[b]. “at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and”

Kuwu discloses a coupling feature disposed on the body. To the extent that Kuwu does not disclose an electrical cable for electrical connection, it would have been obvious to one of ordinary skill in the art to use an electrical cable for electrical coupling.

See e.g., Kuwu at Fig. 9:

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 9 <i>See e.g., Kuwu at 10:23-36:</i> “In this embodiment, the luminance adjustable module 32 is electrically connected between the switching element 11 and the driving device 12. In addition, the luminance adjustable module 32 comprises a variable resistor Rs, a plurality of capacitors C1, C2, and a plurality of bidirectional triode thyristors T1, T2. In a case that the switching element 11 is turned on, an AC Voltage from the power source 2 to the bridge rectifier 124 is adjusted by changing the resistance value of the variable resistor Rs. The adjusted AC voltage is converted into a DC voltage by the bridge rectifier 124, and the DC Voltage is transmitted to associated components of the driving device 12. In such way, any of the plural luminance levels is changed as the resistance value of the variable resistor Rs is changed.” <i>See e.g., Kuwu at 1:63-66:</i> “The Switching element is coupled with a power Source. The driving device is electrically connected between the switching element and the light source.” <i>See e.g., Kuwu at 3:52-53:</i> “The Switching part is coupled with a power Source and electrically connected with the lighting part.”

'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	See e.g., Kuwu at 6:14-17: "Moreover, the switching element 11 is coupled with a power source 2, and the driving device 12 is electrically connected between the switching element 11 and the light source 13." See e.g., Kuwu at Fig. 1:  FIG.1
13[c]. "an actuator disposed on the body, wherein the actuator has a range of positions,"	Kuwu discloses an actuator disposed on the body, wherein the actuator has a range of positions. See e.g., Kuwu at Fig. 8:

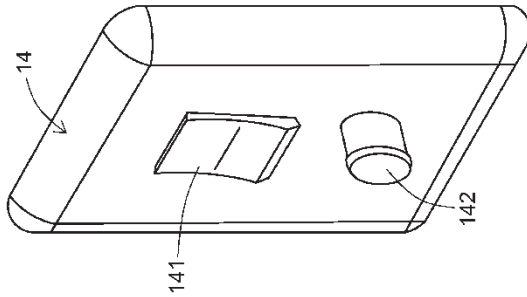
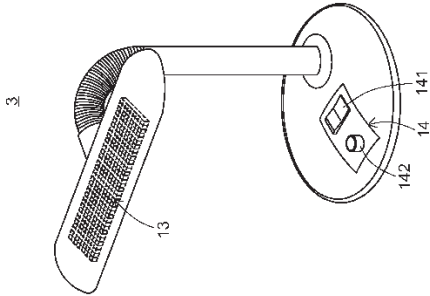


FIG. 8

See e.g., Kuwu at Fig. 9:

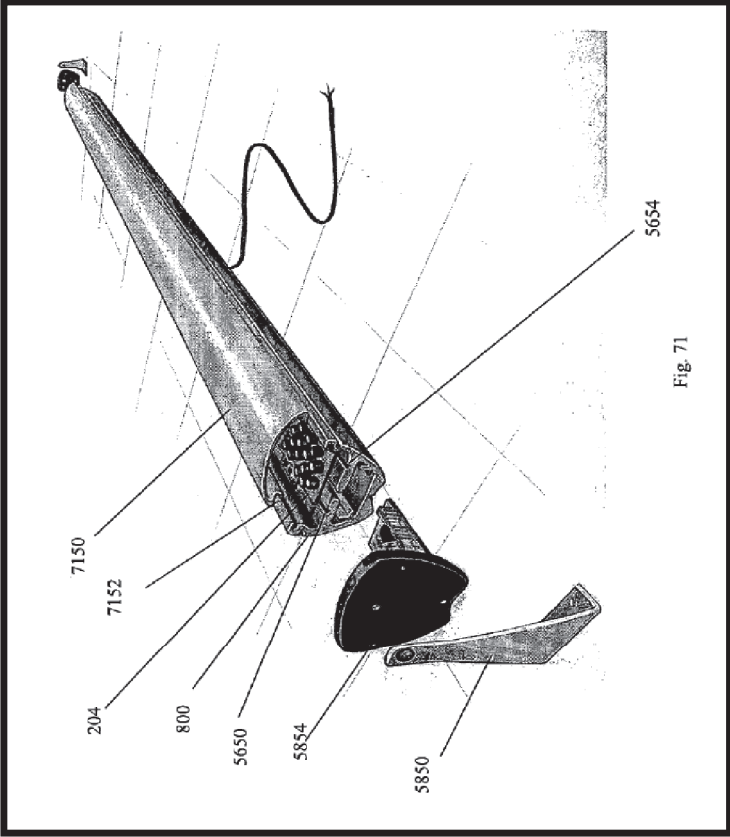
'336 Claim/Element	U.S. Patent No. 8,729,812 ("Kuwu") Alone And/Or in View of The Secondary References Identified Above
	 FIG. 9
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	See claim 1[e].
15. "The switch of claim 13, wherein each position is discrete within the range of positions."	See claim 3.
16. "The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position."	See claim 4.
19. "The switch of claim 13, wherein the body is configured to be disposed within a junction box."	See claim 7.

U.S. Patent No. 7,178,941 (“Roberge”) and Additional References re ’336 Patent

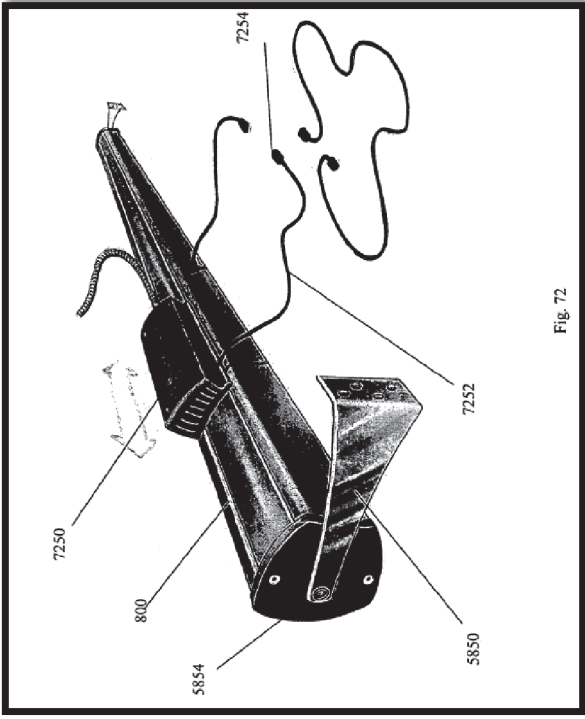
Primary Reference: U.S. Patent No. 7,178,941 (“Roberge”)

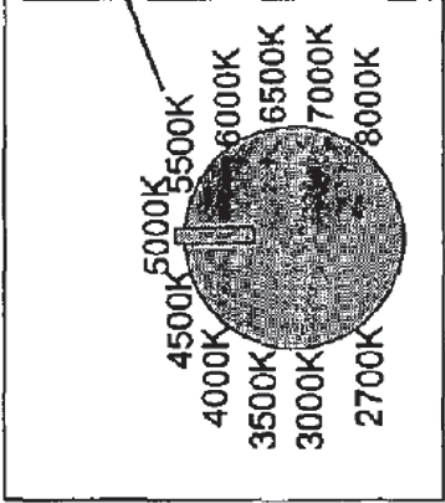
Secondary Reference(s): U.S. Patent No. 9,801,250 (“Halliwell”); U.S. Patent No. 10,234,091 (“Chaimberg”).

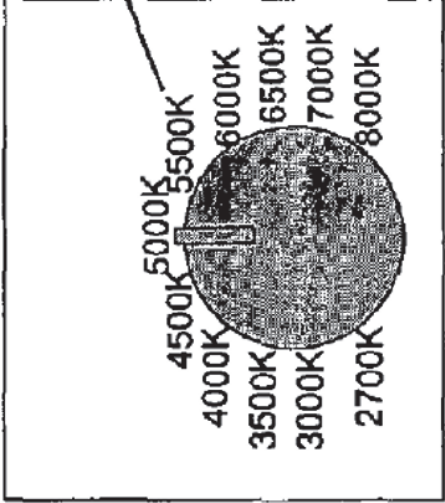
’336 Claim/Element	U.S. Patent No. 7,178,941 (“Roberge”) Alone And/Or in View of The Secondary References Identified Above
1 [pre]. “A luminaire comprising:”	To the extent the preamble is limiting, Roberge discloses the preamble of claim 1 of the ’336 Patent. For example, Roberge discloses “Methods and systems are provided for lighting system, including high output linear lighting systems for various environments. The linear lighting systems may include power systems for driving light sources in high-voltage environments.” Roberge at Abstract. Further, Roberge discloses an embodiment in which “the housing 800 may be a housing for an architectural, theatrical, or entertainment lighting fixture, luminaire, lamp, system or other product.” Roberge at 17:54-56. Thus, Roberge discloses a luminaire as recited in the preamble of claim 1 of the ’336 Patent.
1[a]. “a housing comprising at least one outer surface that forms a first cavity,”	Roberge discloses element 1[a] of claim 1 of the ’336 Patent. For example, Roberge discloses a lighting fixture of Fig. 71 that includes a housing 800 that forms a cavity wherein the circuit board 204 is located. Roberge at 66:43-50, Fig. 71.

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
1[b]. "at least one electrical component disposed, at least in part, within the first cavity;"	 Further, Roberge discloses a "plurality of slots 5654, such as T-slots, can be added into the interior of the housing 800 to assist in the mounting of internal hardware such as the board 204 and the power facility 1800. Slots 5658 and 5660 can be provided to hold and fasten a lens and bottom cover, respectively. Roberge at 65:11-15. Additionally, claim 1 of Roberge claims "A lighting method, comprising: providing a substantially linear housing having a first cavity extending longitudinally therein, the first cavity holding a circuit board, the circuit board supporting a plurality of LED light sources" Roberge at claim 1. Thus, Roberge discloses the housing as recited element 1[a] of claim 1 of the '336 Patent. Roberge discloses element 1[b] of claim 1 of the '336 Patent. For example, Roberge discloses an electrical LED board within the first cavity. "FIG. 71 shows a cutaway view of components of a linear lighting system 100, including the boards 204, the housing 800, the end plate 5854, and the channel 5650. A variety of features are built into the extrusion to facilitate location and assembly of all subcomponents. This includes the T-slots 5654 (similar to those used on machine tools) for

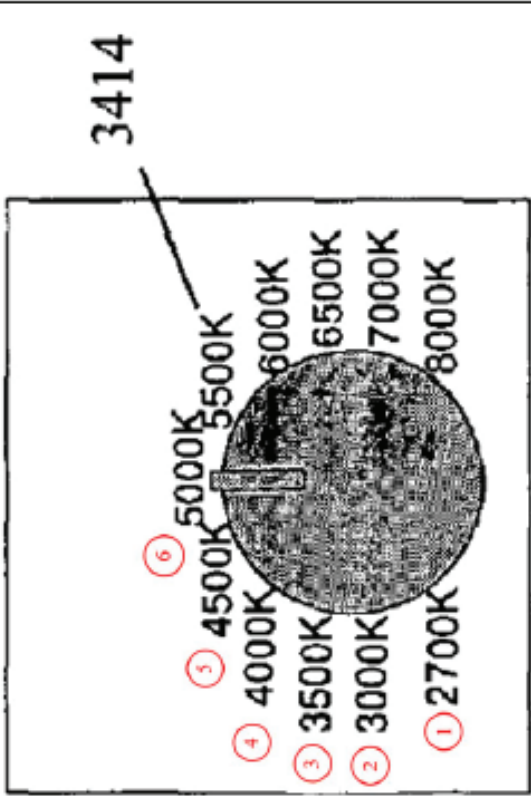
'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	mounting, which act like secure rails to attach and locate components within the housing." Roberge at 66:43-50, Fig. 71. Fig. 71 Further, claim 1 of Roberge claims "A lighting method, comprising: providing a substantially linear housing having a first cavity extending longitudinally therein, the first cavity holding a circuit board, the circuit board supporting a plurality of LED light sources" Roberge at claim 1. Thus, Roberge discloses the electrical component as recited element 1[b] of claim 1 of the '336 Patent.
1[c]. "an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and"	Roberge discloses element 1[c] of claim 1 of the '336 Patent. For example, Roberge discloses an extension cord 7252 that connects to the housing. "FIG. 72 shows a linear lighting system 100 with the housing 800. A modular power supply 7250 is connected to the outside of the housing 800. An extension cord 7252 ends in a conventional connector 7254." Roberge at 66:62-65, Fig. 72.

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	 Thus, Roberge discloses the electrical cable as recited element 1[c] of claim 1 of the '336 Patent.
1[d]. "a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing,"	Roberge discloses element 1[d] of claim 1 of the '336 Patent. For example, Roberge discloses remote control facilities for the lighting unit. "Control facilities can be local to a lighting unit 102 or remote from the lighting unit 102." Roberge at 24:63-64. In some embodiments, "a user interface 4908 instructs a lighting system 100 to produce a desired mixed light output. The user interface can be remote control . . ." Roberge at 44:18-20. And in "various implementations, the signal source(s) 8400 may be located remotely from the lighting unit 102" Roberge at 59:30-32. Thus, Roberge discloses the switch as recited element 1[d] of claim 1 of the '336 Patent.
1[e]. "wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature	Roberge discloses element 1[e] of claim 1 of the '336 Patent. For example, Roberge discloses a number of controls and switches for controlling the varying CCT outputs. Fig. 34i shows "a dial [that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light. The lighting designer can specify

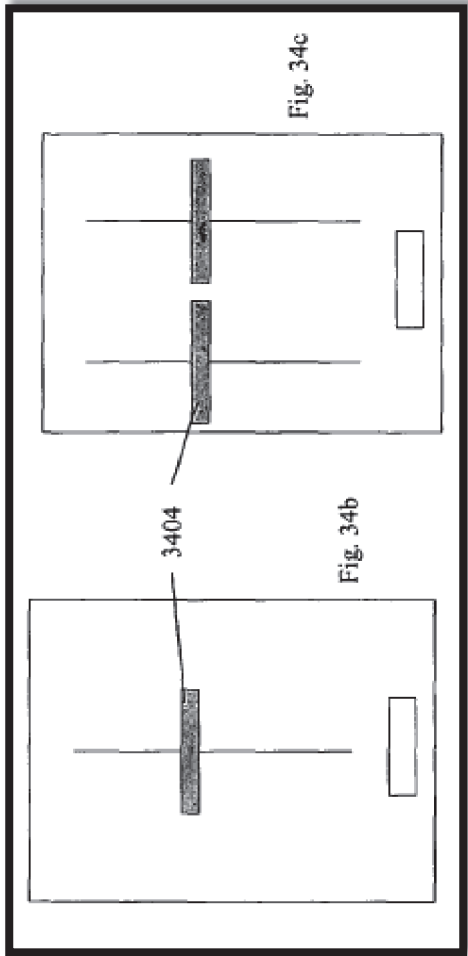
'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
(CCT) output by one or more light sources of the luminaire."	use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:51-57, Fig. 34i.  Fig. 34i Further, while Fig. 34i discloses a rotary switch, Roberge discloses that "[a] slide mechanism [i.e., switch] can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. Additionally, claim 22 of Roberge claims a "system of claim 10, comprising: user interface comprising a first selector for group selecting the plurality of light sources into a number of differently addressable groups and a second selector for selecting a base address; and a controller arranged to receive in input from the user interface for controlling the plurality of light sources based on the selected number of differently addressable groups and the base address, such that each of the plurality of light sources in a given addressable group responds to commands issued to the given addressable group." Roberge at claim 22. Thus, Roberge discloses element 1[e] of claim 1 of the '336 Patent.
3. "The luminaire of claim 1, wherein each position of the plurality of positions is discrete."	Roberge discloses claim 3 of the '336 Patent. For example, referring to Fig. 34i, "in embodiments a dial allows a user to select one or more colors or color temperatures from a scale 3414. For example, the scale 3414 can include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:51-57, Fig. 34i.  Fig. 34i Thus, Roberge discloses the discrete positions as recited in claim 3 of the '336 Patent. Roberge alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Roberge discloses a switch with five positions. Fig. 34i shows "a dial [switch that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light" Roberge at 42:51-54, Fig. 34i.
4. "The luminaire of claim 3, wherein the plurality of positions of the switch comprises a first position, a second position, a third position, a fourth position, and a fifth position."	

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
5. "The luminaire of claim 4, wherein the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position	Roberge at Fig. 34i (annotated). Further, "[t]he lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:54-57. Fig 34i shows a switch that includes 11 positions, including a first, second, third, fourth, and fifth position. While Fig. 34i shows a "dial" switch, Roberge discloses that "[a] slide mechanism can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. Thus, Roberge discloses the plurality of positions as recited in claim 4 of the '336 Patent.
the first position of the switch corresponds to 2700 Kelvin (K) output by the one or more light sources, wherein the second position of the switch corresponds to 3000 K output by the one or more light sources, wherein the third position of the switch corresponds to 3500 K output by the one or more light sources, wherein the fourth position	Roberge alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, the switch of Fig. 34i of Roberge includes 11 positions, including first (2700K), second (3000K), third (3500K), fourth (4000K), fifth (4500K), and sixth positions (5000K):

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
of the switch corresponds to 4000 K output by the one or more light sources, and wherein the fifth position of the switch corresponds to 5000 K output by the one or more light sources."	 Roberge at Fig. 34i (annotated). Roberge discloses that the eleven temperatures are exemplary. Roberge at 42:51-65. Thus, Roberge discloses switch positions and corresponding temperatures as recited in claim 5 of the '336 Patent.
7. "The luminaire of claim 1, further comprising: a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch."	Roberge alone, or in combination with other prior art references renders obvious claim 4 of the '336 Patent. For example, Roberge discloses remote control facilities for the lighting unit. "Control facilities can be local to a lighting unit 102 or remote from the lighting unit 102." Roberge at 24:63-64. In some embodiments, "a user interface 4908 instructs a lighting system 100 to produce a desired mixed light output. The user interface can be remote control . . ." Roberge at 44:18-20. And in "various implementations, the signal source(s) 8400 may be located remotely from the lighting unit 102" Roberge at 59:30-32. Roberge further discloses: "In embodiments the drive hardware 3802 includes at least one energy transfer element to store input energy based on an applied input voltage and to provide output energy to a load at

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
9. "The luminaire of claim 1, wherein the switch is a slide switch."	While Chaimberg discloses that locating the CCT switch 18 on the electrical cable 15, away from the junction box (<i>i.e.</i> driver housing 16). A POSA would understand that Chaimberg discloses that the CCT switch 18 could be located on/in the driver housing 16. Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. A POSA also would have been motivated to place the switch inside the junction box to make the switch less accessible to users or visitors to the light fixture's installed location in certain business applications. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious an LED light fixture with "a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch" as recited in claim 7 of the '336 Patent. Roberge discloses claim 9 of the '336 Patent. For example, while Fig. 34i shows a "dial" switch, Roberge discloses that "[a] slide mechanism can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. "In embodiments, other user interfaces can trigger shows stored on a light system engine 5008, such as a knob, a dial, a button, a touch screen, a serial keypad, a slide mechanism, a switch, a sliding switch, a switch/slide combination ... or any other input capable of providing a signal to the light system engine 5008." Roberge at 58:49-55. Further, "FIG. 34b and FIG. 34c show user interfaces 4908 involving slides 3404 that can change the intensity or color, depending on the mode." Roberge at 42:13-15.

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
11. "The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed."	 Roberge at Figs. 34b, 34c. Thus, Roberge discloses a slide switch as recited in claim 9 of the '336 Patent. Roberge discloses claim 11 of the '336 Patent. For example, Roberge discloses: "In embodiments a switch, such as a wall switch, can include a processor 3600, memory 3700 and a communications port for receiving data. The switch can be linked to a network, such as an office network, Internet, or home network. Each switch can be an intelligent device that responds to communication signals via the communications port to provide control of any lighting units 102 from any location where another switch or intelligent device may be located. Such a switch can be integrated through smart interfaces and networks to trigger shows (such as using a lighting control player, such as iPlayer 2 available from Color Kinetics) as with a lighting controller such as a ColorDial from Color Kinetics. Thus, the switch can be programmed with light shows to create various aesthetic, utilitarian or entertainment effects, of white or non-white colors. In embodiments, an operator of a system can process, create or download shows, including from an external source such as the Internet. Shows can be sent to the switch over a communication facility of any kind. Various switches can be programmed to play back and control any given lighting unit 102. In embodiments, settings can be controlled through a network or other interface, such as a web interface." Roberge at 38:27-48. A POSITA would recognize how to render the switch inaccessible when the housing is installed.

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To the extent that Roberge does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell.

For example, the switch 18 is inaccessible when housing is installed. Chaimberg at (57) (“The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED’s or both sets of LED’s simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light.”); see *also id.* at Fig. 2.

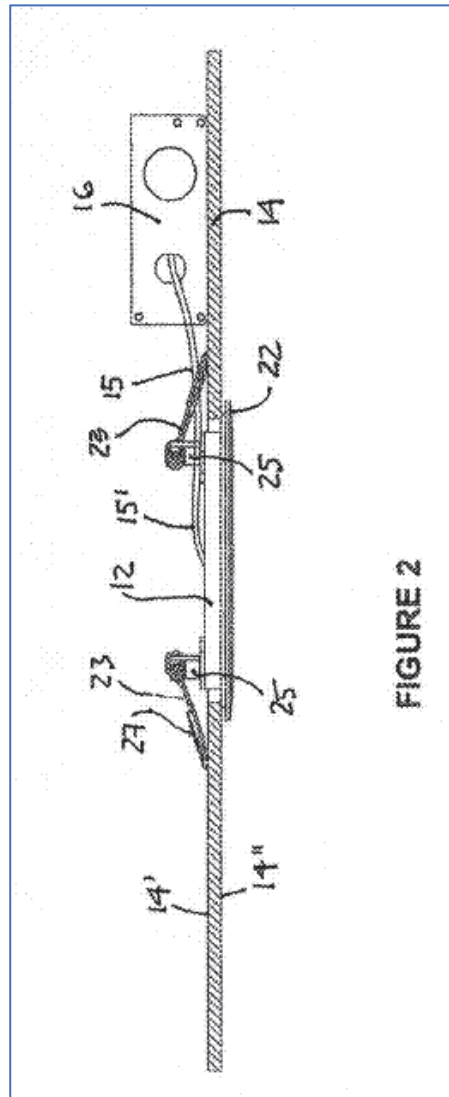


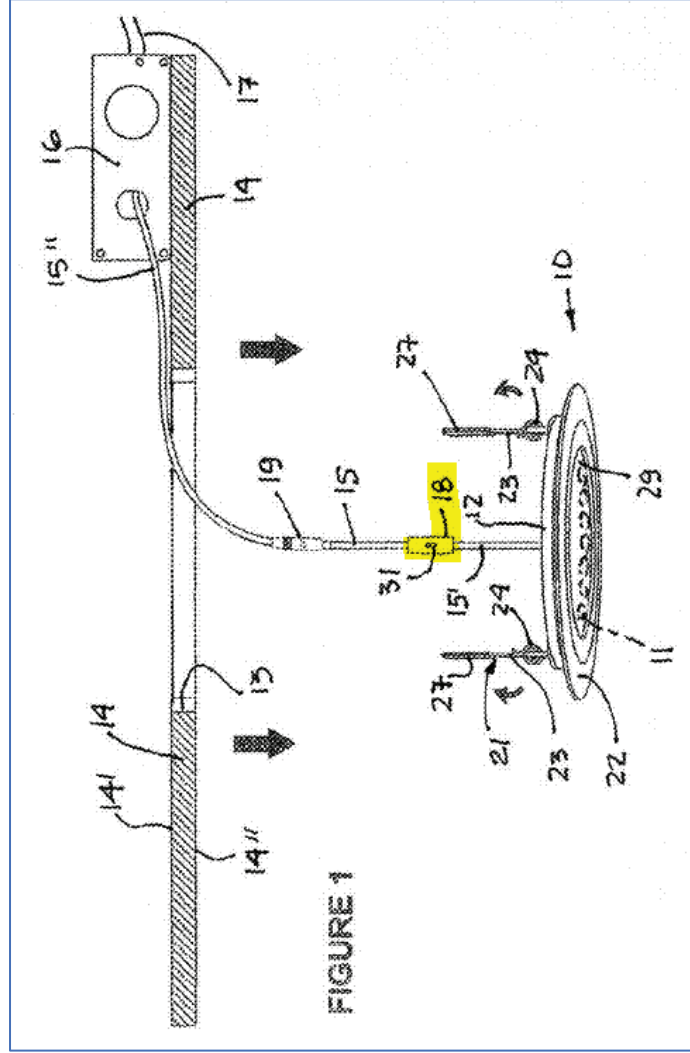
FIGURE 2

Further, the LED fixture is “adapted to be removably secured in a housing mounting hole in a ceiling sheeting material,” the “selector switch 18 is mounted [in/on the cable 15” (Chaimberg at Abstract, 3:49-54), and the selector switch 18 “is made accessible and visible by simply withdrawing the light fixture from” the ceiling. *Id.*, Abstract. When the light fixture is “retracted from its fixture mounting hole,” the switch 18 is below the ceiling 14 and accessible to the user. *Id.*, 3:13-15, Fig. 1. Fig. 2 shows the light fixture “mounted in the fixture mounting hole.” *Id.*, 2:58-61, Fig. 2. The cable 15 (where the switch 18 is mounted) is on the inner side of the “ceiling sheeting material 14” and inaccessible when the LED light fixture is installed. *Id.*, 4:16-29, Fig. 2.

Halliwell’s “electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box).” Halliwell at 7:8-19.

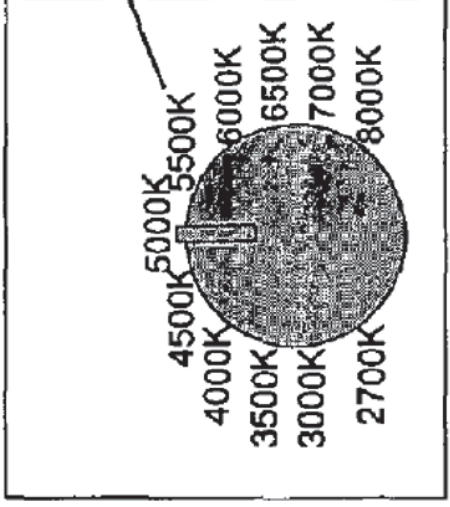
'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and a POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Further, a POSA would have understood that because the CCT switch is mounted in the junction box, it is inaccessible to the user when the LED housing is installed in the ceiling. Moreover, Halliwell discloses that "a user may select a desired operating light aspects or qualities (e.g., color temperature...) for the ... LED lighting device before the ... LED lighting device is installed" in a ceiling, confirming that the switch will be inaccessible after the LED lighting device is installed. Halliwell at 4:31-35. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
12. "The luminaire of claim 1, wherein the switch is accessible to a user when the housing is removed from its installed location."	Roberge discloses claim 12 of the '336 Patent. For example, Roberge discloses: "In embodiments a switch, such as a wall switch, can include a processor 3600, memory 3700 and a communications port for receiving data. The switch can be linked to a network, such as an office network, Internet, or home network. Each switch can be an intelligent device that responds to communication signals via the communications port to provide control of any lighting units 102 from any location where another switch or intelligent device may be located. Such a switch can be integrated through smart interfaces and networks to trigger shows (such as using a lighting control player, such as iPlayer 2 available from Color Kinetics) as with a lighting controller such as a ColorDial from Color Kinetics. Thus, the switch can be programmed with light shows to create various aesthetic, utilitarian or entertainment effects, of white or non-white colors. In embodiments, an operator of a system can process, create or download shows, including from an external source such as the Internet. Shows can be sent to the switch over a communication facility of any kind. Various switches can be programmed to play back and control any given lighting unit 102. In embodiments, settings can be controlled through a network or other interface, such as a web interface." Roberge at 38:27-48. A POSITA would recognize how to render the switch accessible when the housing is removed from its installed location. To the extent that Roberge does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chamberg and/or Halliwell.

For example, the switch 18 is accessible when housing is removed from its installed location. Chaimberg at (57) ("The toggle switch is made accessible and visible by simply withdrawing the light fixture from its mounting hole and by displacing a slide switch button to select one of three positions to energize a selected one of both sets of LED's or both sets of LED's simultaneously whereby to cause the LED light fixture to generate one of three different color temperature (CCT) light."); *see also id.* at 1:8-15 ("The present invention relates to light emitting diode (LED) light fixtures and more specifically to a ceiling mountable LED light fixture having at least two sets of LED's of different correlated color temperature (CCT) and wherein a selector switch is mounted in a cable secured to the LED light fixture and which is readily accessible when the LED light fixture is removed from its ceiling mounting hole."); Fig. 1.



Further, the CCT switch 18 "is made accessible and visible by simply withdrawing the light fixture from" the ceiling. Chaimberg at Abstract. Figure 1 shows that the switch 18 is "accessible and visible" to the user when the housing is removed from its installed location (*id.*, Abstract, 4:16-29). Fig. 1.

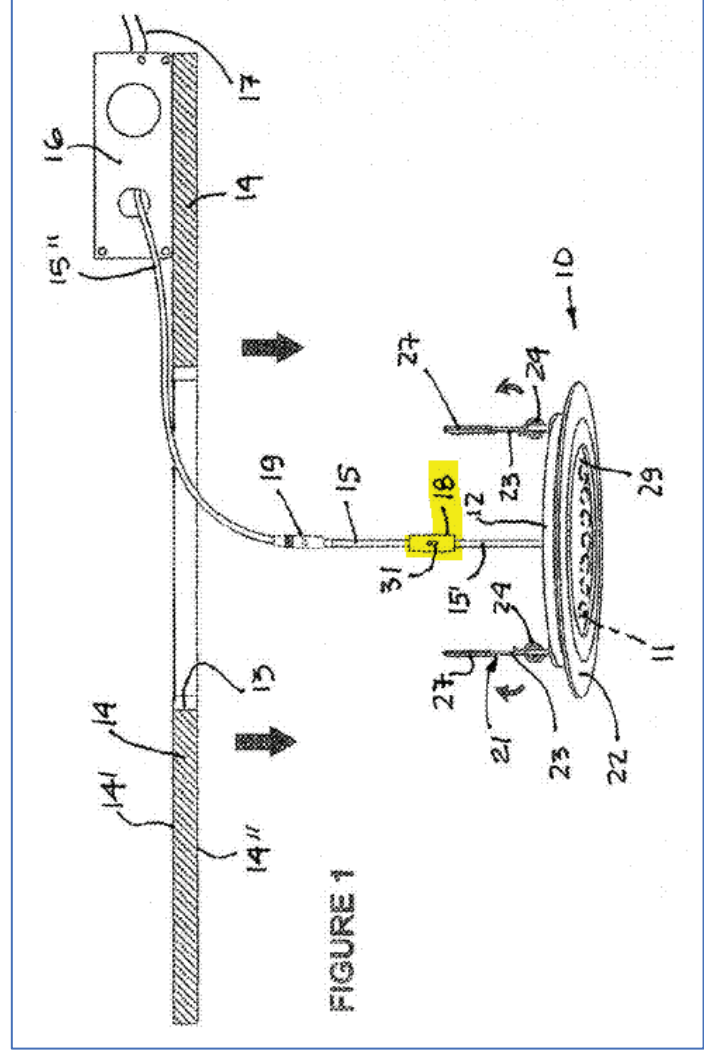
'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	Halliwell's "electrical components of the LED lighting device 20 (e.g., the driver circuitry 19, switch control unit 35, and/or the like) may be configured to be directly wired to line voltage (e.g. through a junction box)." Halliwell at 7:8-19. Further, Halliwell discloses "the switch disposed within the second cavity" of the junction box. Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Halliwell at 17:39-42. Halliwell describes enclosing other electrical components (e.g., electrical cables and connections) inside the junction box (<i>see</i> Halliwell at 7:8-19), and the POSA would have been motivated to also include the switch within the junction box to protect the switch from dust, debris, and/or other elements. Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
13[pre]. "A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:"	To the extent the preamble is limiting, Roberge discloses the preamble of claim 13 of the '336 Patent. For example, Roberge discloses a number of controls and switches for controlling the varying CCT outputs. Fig. 34i shows "a dial [that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:51-57, Fig. 34i.

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	 Fig. 34i Further, while Fig. 34i discloses a rotary switch, Roberge discloses that "[a] slide mechanism [i.e., switch] can be used like the dial to set a particular color temperature of white light." Roberge at 42:57-59. Additionally, claim 22 of Roberge claims a "system of claim 10, comprising: user interface comprising a first selector for group selecting the plurality of light sources into a number of differently addressable groups and a second selector for selecting a base address; and a controller arranged to receive in input from the user interface for controlling the plurality of light sources based on the selected number of differently addressable groups and the base address, such that each of the plurality of light sources in a given addressable group responds to commands issued to the given addressable group." Roberge at claim 22. Thus, Roberge discloses a switch for controlling a CCT of light as recited in the preamble of claim 13 of the '336 Patent.
13[a]. "a body;"	Roberge discloses element 13[a] of claim 13 of the '336 Patent. For example, Roberge discloses: "In embodiments a switch, such as a wall switch, can include a processor 3600, memory 3700 and a communications port for receiving data. The switch can be linked to a network, such as an office network, Internet, or home network. Each switch can be an intelligent device that responds to communication signals via the communications port to provide control of any lighting units 102 from any location where another switch or intelligent device may be located. Such a switch can be

integrated through smart interfaces and networks to trigger shows (such as using a lighting control player, such as iPlayer 2 available from Color Kinetics) as with a lighting controller such as a ColorDial from Color Kinetics. Thus, the switch can be programmed with light shows to create various aesthetic, utilitarian or entertainment effects, of white or non-white colors. In embodiments, an operator of a system can process, create or download shows, including from an external source such as the Internet. Shows can be sent to the switch over a communication facility of any kind. Various switches can be programmed to play back and control any given lighting unit 102. In embodiments, settings can be controlled through a network or other interface, such as a web interface." Roberge at 38:27-48.

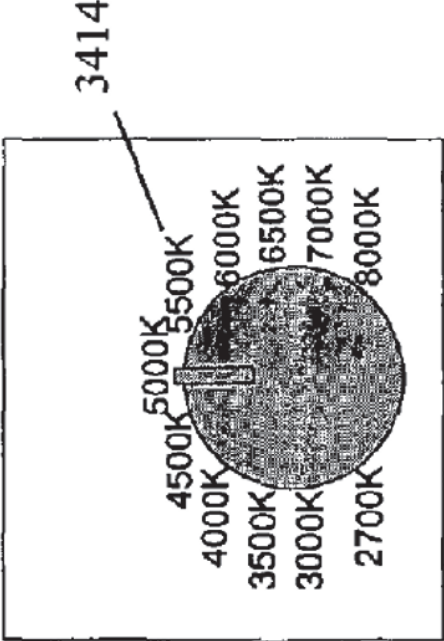
To the extent that Roberge does not explicitly disclose this limitation, it would have been obvious to one of ordinary skill in the art to modify this reference to include these portions in view of the secondary references below, including Chaimberg and/or Halliwell.

For example, the switch 18 of Chaimberg "is a toggle switch provided with a slide button 31 having two conducting arms 32 and 33 and displaceable to three switch positions," that includes a body. Chaimberg at 4:30-48; see also *id.* at 4:37-5:10; Fig. 1.



'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	Thus, the switch 18 of Chaimberg includes "a body" as recited in element 13[a] of claim 13 of the '336 Patent. Halliwell's exemplary CCT switch 30 includes a body, which is highlighted in yellow in Fig. 4 below. Halliwell at Fig. 4 (color added). Accordingly, Roberge alone, or in the knowledge of a POSITA, or in combination with other prior art references, renders obvious this limitation of the '336 Patent.
13[b]. "at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and"	Roberge discloses element 13[b] of claim 13 of the '336 Patent. For example, Roberge discloses "as also shown in FIG. 2, the lighting unit 102 optionally may include one or more user interfaces 4908 that are provided to facilitate any of a number of user-selectable settings or functions (e.g., generally controlling the light output of the lighting unit 102, changing and/or selecting various pre-programmed lighting effects to be generated by the lighting unit, changing and/or selecting various parameters of selected lighting effects, setting particular identifiers such as addresses or serial numbers for the lighting unit, etc.). In various embodiments, the communication between the user interface 4908 and the lighting unit may be accomplished through wire or cable, or wireless transmission." Roberge at 41:6-48.

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	Fig. 34i is a circular dial with a pointer. The dial is labeled with temperature values in Kelvin (K): 2700K, 3000K, 3500K, 4000K, 4500K, 5000K, 5500K, 6000K, 6500K, 7000K, and 8000K. A pointer is shown pointing to the 5000K mark. The dial is labeled with the reference numeral 3414. Roberge at Fig. 34i. Thus, Roberge discloses an actuator with a range of positions as recited in element 13[c] of claim 13 of the '336 Patent.
13[d]. "wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire."	Roberge discloses element 13[d] of claim 13 of the '336 Patent. For example, Roberge in Fig. 34i shows "a dial [that] allows a user to select one or more color temperatures from a scale 3414[, which can] include different color temperatures of white light. The lighting designer can specify use of a particular color temperature of light, which the installer can select by setting the right position on the scale 3414 with the dial." Roberge at 42:51-57, Fig. 34i.

'336 Claim/Element	U.S. Patent No. 7,178,941 ("Roberge") Alone And/Or in View of The Secondary References Identified Above
	 Fig. 34i Roberge at Fig. 34i. Thus, Roberge discloses a range of actuator positions corresponding to a CCT of the light as recited in element 13[d] of claim 13 of the '336 Patent.
15. "The switch of claim 13, wherein each position is discrete within the range of positions."	Roberge discloses claim 15 for the reasons discussed above with respect to claim 3. See claim 3 above.
16. "The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position."	Roberge alone, and/or in view of the other cited prior art references renders obvious claim 16 for the reasons discussed above with respect to claim 4. See claim 4 above.
19. "The switch of claim 13, wherein the body is configured to be disposed within a junction box."	Roberge alone, and/or in view of the other cited prior art references renders obvious claim 19 for the reasons discussed above with respect to claim 7. See claim 7 above.