

United States District Court  
Southern District of Texas

**ENTERED**

July 14, 2022

Nathan Ochsner, Clerk

**IN THE UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

UV PARTNERS, INC.,

Plaintiff,

V.

PROXIMITY SYSTEMS, INC.,

Defendant.

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CIVIL ACTION NO. 20-cv-4120

**MEMORANDUM OPINION ON CLAIM CONSTRUCTION**

UV Partners, Inc., also known as UV Angel, makes products that use UV light technology to clean and disinfect surfaces that people frequently touch, and sometimes share. Proximity Systems, Inc. makes products that also use UV light technology to disinfect various surfaces. UV Partners alleges that Proximity’s products infringe UV Partners’s patents. UV Partners sued Proximity in December 2020 and has subsequently amended its complaint twice, alleging that Proximity infringed its U.S. Patent Nos. 9,901,652, 10,413,624, and 11,219,699. (Docket Entry No. 43). UV Partners seeks injunctive relief and damages. (*Id.* at 26). Proximity denies infringement and alleges that some of the claims in the UV Partners patents are invalid. (Docket Entry No. 45, Affirmative Defenses, ¶¶ 2–3).

The parties have submitted technology tutorials and briefed claim construction issues. (Docket Entry Nos. 31, 32, 33, 34, 35). The parties submitted a joint claim construction and *Markman* statement that identified 39 disputed terms across the ‘652 and ‘624 Patents.<sup>1</sup> (Docket

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<sup>1</sup> The claim construction does not include the ‘699 Patent, which was included later in the second amended complaint. The parties told the court at the status conference held on January 27, 2022, that adding this patent to the second amended complaint did not affect claim construction because the patent was similar to the others. (Docket Entry Nos. 40, 61). In a July 2022 status report, Proximity now advises that it wants to add time for additional claim construction litigation on the ‘699 Patent. (Docket Entry No. 63). Proximity’s request was filed before this detailed claim

Entry No. 37-1). The parties agree to the construction of one term, and another is repeated, bringing the number down to 37 disputed terms. (*Id.*) The court held a *Markman* claim construction hearing on March 14, 2022. (Docket Entry No. 46). The parties attempted to settle some or all of the claim construction disputes, without success. (Docket Entry No. 56). The parties submitted a post-hearing claim construction chart, again identifying 37 claim disputes. (Docket Entry No. 55-1).

Based on the parties' claim-construction briefs, counsels' arguments, the record, and the applicable law, the court construes the 37 disputed terms. The constructions and the reasons for them are set out in detail below.

## **I. Factual Background**

This case involves various portable UV light sterilization products used to disinfect touch surfaces of human interface devices. These devices include electronic keyboards, touchscreens, trackpads, keypads, and point-of-sale terminals. UV Partners provides companies and individuals with tools to clean workplace environments using patented UV-C light technology. (Docket Entry No. 43 at ¶¶ 1–2).

Proximity designs, manufactures, and sells wall-mounted workstations and cabinets. Proximity's customers are primarily hospitals and other entities and businesses in the healthcare industry. (*Id.* at ¶ 3).

On May 29, 2015, UV Partners and Proximity entered into a Distributor Agreement. Proximity agreed to distribute certain UV Partners products in connection with its sales of its wall-mounted workstations and cabinets. (*Id.* at ¶ 4). Proximity was required “to use its best effort in marketing, promoting selling and distributing” UV Partners's products, and to maintain the

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construction opinion issued. The parties may explain the need for further claim construction litigation after they have reviewed this memorandum and opinion, at the upcoming status and scheduling conference.

confidentiality of its trade secret information. (*Id.* at ¶ 9). Proximity and UV Partners worked closely together, and UV Partners alleges that its disinfecting technology helped drive product sales for Proximity. (*Id.* at ¶¶ 7–8). On April 8, 2016, Proximity invested in UV Partners, executing a promissory note in favor of UV Partners for \$150,000. (*Id.* at ¶ 6).

UV Partners alleges that the trouble began when, unbeknownst to it, Proximity began developing its own competing product, which it called UV-CLEAN. (*Id.* at ¶ 10). When UV Partners discovered the new product line, Proximity sued UV Partners, seeking the return of the money that Proximity had paid UV Partners under the promissory note. The parties settled that claim but left unresolved UV Partners’s infringement claims. (*Id.* at ¶¶ 18–19). Those claims are the basis of this lawsuit.

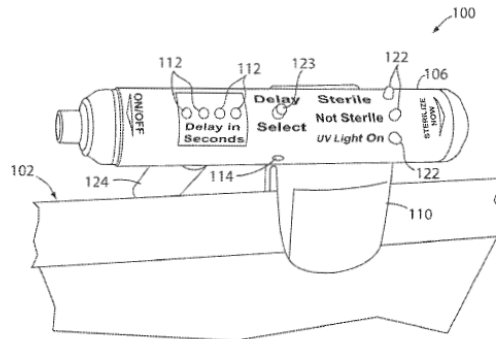
UV Partners alleges that Proximity has known of the ‘624 and ‘652 Patents since at least December 2020, when UV Partners served Proximity with this complaint. (*Id.* at ¶¶ 35, 49). UV Partners alleges that Proximity has known of the ‘699 Patent since at least February 2022, when UV Partners filed the second amended complaint. (*Id.* at ¶¶ 64–65).

#### **A. The ‘652 Patent**

The ‘652 Patent, entitled “Portable Light Fastening System,” discloses Theodore John Cole and Donald Paul McConnell as inventors, issued on February 27, 2018, and is assigned to UV Partners. (*Id.* at ¶ 27). The ‘652 Patent claims a germicidal system for use in disinfecting human interface devices. The claimed system consists of: (1) a housing defining an aperture; (2) an ultra-violet (UV) light source at least partially enclosed in the housing and configured to project an illumination pattern; (3) an attachment device extending from the housing; and (4) a sensor coupled to the housing, (5) wherein the attachment device is configured to removably attach to a separate human interface device for disinfecting a touch surface of the human interface device,

and (6) wherein when the attachment device is attached to the human interface device, the illumination pattern substantially corresponds to the touch surface, (7) wherein the sensor is configured to measure movement of the attachment device relative to the human interface device and to turn the UV light source from on to off when a predetermined movement is measured. (*Id.* at ¶ 51).

A figure from the '652 Patent is shown below:



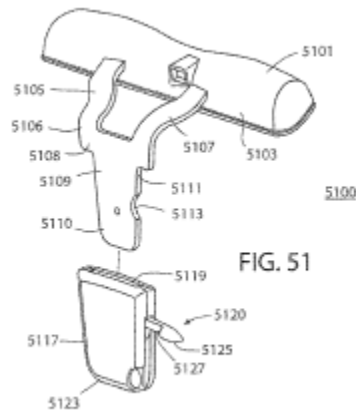
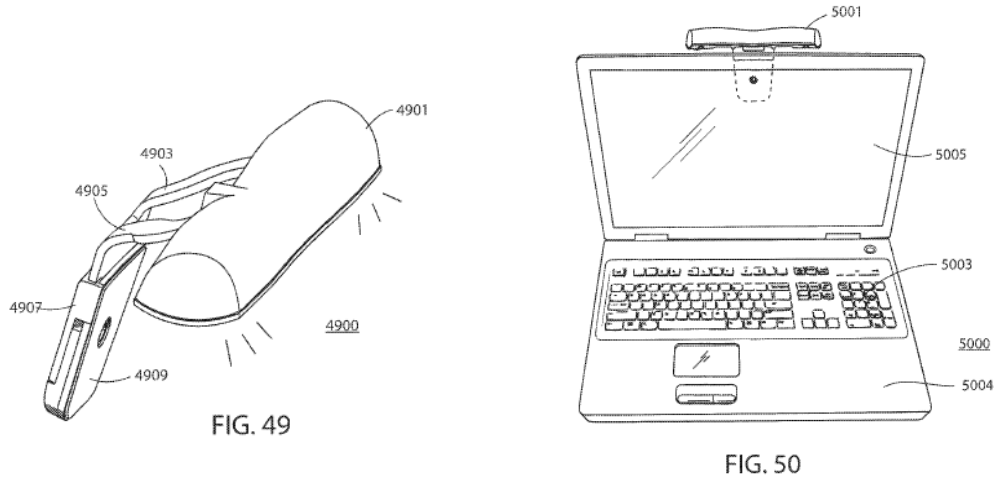
(Docket Entry No. 20-4 at 6).

### **B. The '624 Patent**

The '624 Patent, entitled "Portable Light Fastening Assembly," discloses Theodore John Cole and Donald Paul McConnell as inventors, issued on September 17, 2019, and is assigned to UV Partners. (Docket Entry No. 43 at ¶ 28). The '624 Patent refers to a portable light fastening assembly consisting of: (1) a lamp housing; (2) an attachment device extending from the lamp housing configured to removably affix the portable light fastening assembly to at least one of a table stand and a monitor; (3) an ultra-violet (UV) light source at least partially enclosed in the lamp housing; and (4) wherein the attachment device includes a support member and a paired engagement member is configured to be removably fastened within the receptacle housing for removably affixing the portable light fastening assembly to at least one of a table stand and a monitor; (5) wherein the engagement member is configured to be removably fastened within the

receptacle housing for removably affixing the portable light fastening assembly to at least one of a table stand and a monitor. (*Id.* at ¶ 36).

Examples from the '624 Patent are shown below:



(Docket Entry No. 20-3 at 34–35).

### C. The '699 Patent

The '699 Patent, entitled “Standalone Portable UV Lamp,” discloses Theodore John Cole and Donald Paul McConnell as inventors, issued on January 11, 2022, and is assigned to UV Partners. (Docket Entry No. 43 at ¶ 29). The '699 Patent claims a standalone portable UV lamp for use in disinfecting a human interface device disposed on a surface consisting of: (1) a surface

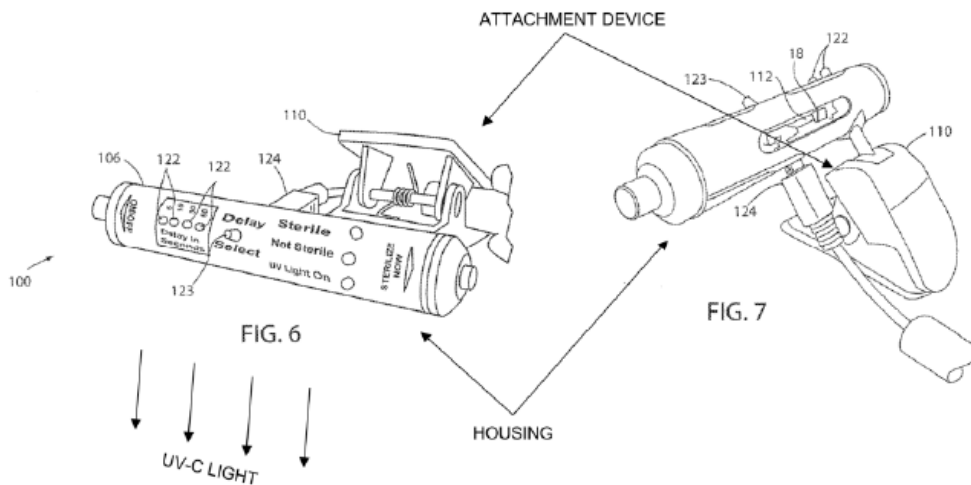
stand configured to be placed on a surface; (2) a support member extending from the surface stand; (3) a shade extending from the support member; (4) an ultra-violet (UV) light source at least partially enclosed in the shade, the UV light source being configured to selectively generate UV illumination; (5) wherein the UV light source, the support member, and the shade cooperatively define a UV illumination profile projecting downwardly to produce a predetermined UV illumination pattern on a human interface device positioned adjacent the standalone portable UV lamp on a common surface upon which the surface stand and a human interface device are disposed, the UV illumination profile being selected such that the illumination pattern accommodates a human interface device while confining the UV illumination to protect against unintended UV illumination exposure; (6) a sensor configured to generate a sensor output indicative of human proximity; (7) a processor configured to (a) automatically enable and disable the UV light source to provide a plurality of iterative UV disinfection cycles; and (b) automatically disable the UV light source in response to human proximity sensor output; (c) wherein the standalone portable UV lamp provides automated disinfection of a human interface device disposed on a common surface with the surface stand while interrupting disinfection in response to human proximity. (*Id.* at ¶ 68).

#### **D. The Patented Technology**

UV Partners and Proximity each submitted tutorials to the court. The parties agree that UV light's disinfecting properties have long been known. The parties also agree that modern UV disinfection systems are engineered to balance their efficacy in destroying pathogens with their safety in minimizing human exposure to UV light. The parties dispute whether Proximity is infringing a UV disinfection system that UV Partners has patented.

UV Partners claims a device that can easily be attached to, and removed from, different computers, monitors, or other items with touch surfaces—such as keyboards and trackpads—to be disinfected, creating a portable system that can be moved from one computer, monitor, or laptop to another. UV Partners claims that this system can detect and respond to the presence of a human hand in the area that is to be cleaned, allowing the UV light to work until the presence of a human hand is detected. When that occurs, the system deactivates the UV light.

Figures 6 and 7 (pictured below) from the '652 and '624 Patents provide an example of UV Partners's patented UV light systems that are designed to achieve this combination of efficacy in disinfection and safety in avoiding human contact.



The germicidal system **100** includes a housing **106** and an attachment device **110**. The attachment device **110** can clamp onto a computer monitor, and the housing **106** includes an internal UV bulb that directs UV light onto an associated keyboard when the computer is not in use. The assembly shown in Figure 7 uses a clip-on and clip-off attachment device. UV Partners also claimed other portable assemblies, shown below in Figures 50, 51, and 54.

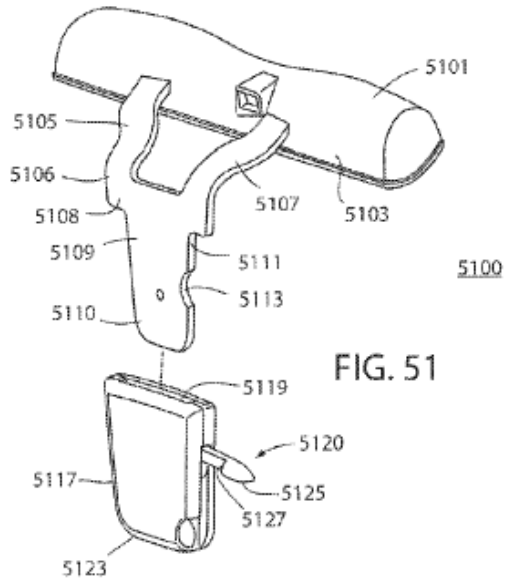


FIG. 51

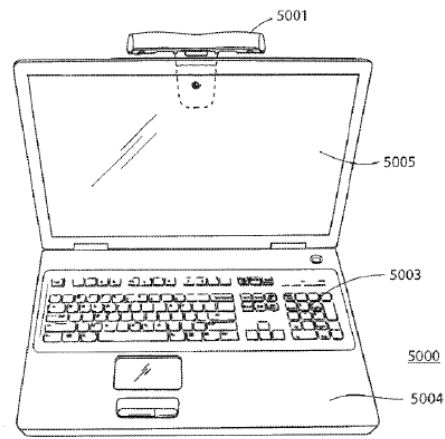


FIG. 50

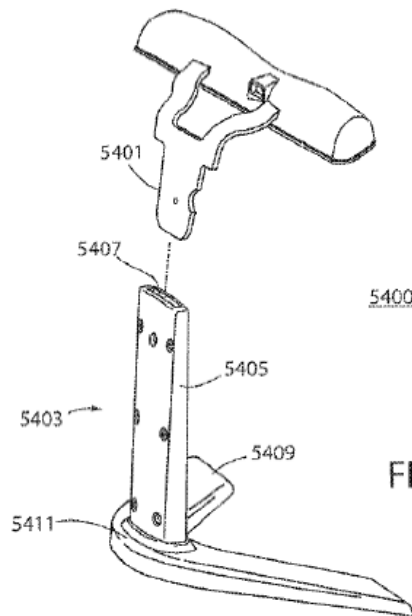
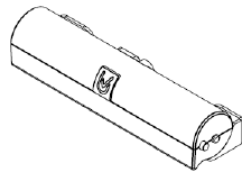


FIG. 54

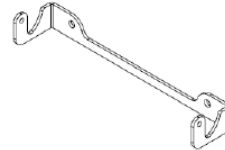
In the portable assembly devices, the light source can be removed from a receptacle housing **5117** that is attached to one object—such as a desktop or laptop computer monitor—and moved to a different object—such as a different desktop or laptop monitor screen, or a table stand. Proximity asserts that the patented inventions are designed for easy attachment and removal of the UV disinfection devices, making them portable.



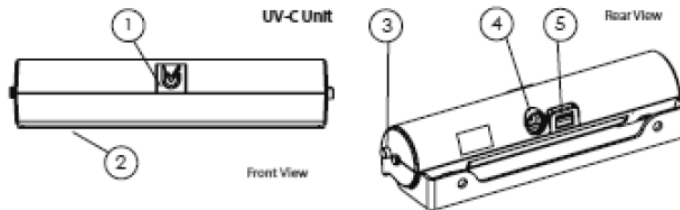
Proximity's accused products include the UV Standalone, the UV CLEAN Surface Mount, the UV CLEAN Clamp Mount, and the UV CLEAN Payment Terminal. Each of the accused products features a lamp head and a main bracket that connects the UV lamp head to a table stand or to a secondary bracket or other assembly (pictured below).



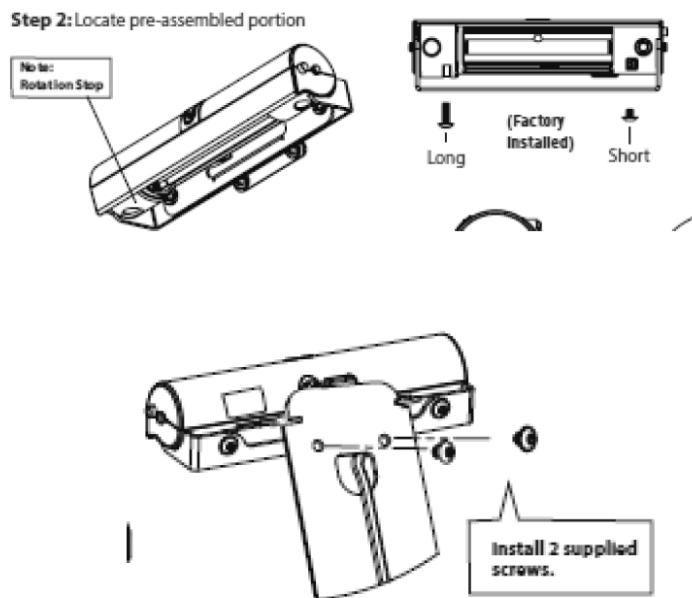
**Lamp Head and Main Bracket**



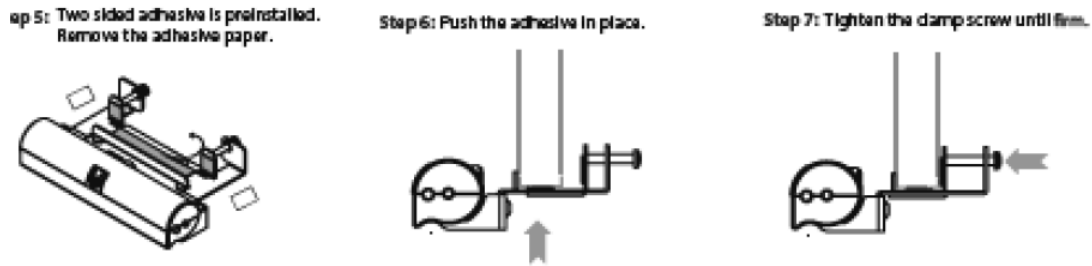
**Main Bracket**



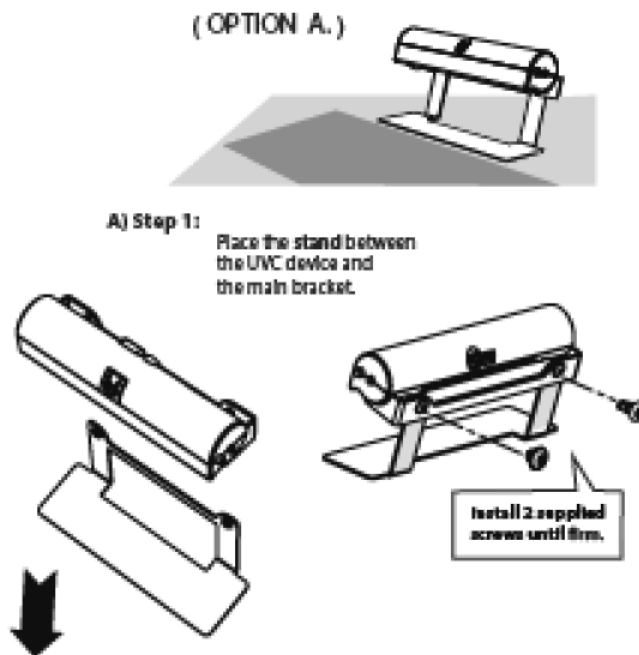
The lamp head and main bracket of the UV CLEAN Standalone (pictured below) are attached to a secondary bracket by screws. That assembly is in turn connected to a table stand by screws:



The lamp head and main bracket assembly of the UV CLEAN Clamp Mount (pictured below) are attached to a clamp assembly by screws. The clamp assembly uses adhesive to grip the downward-facing lower surface of a monitor and uses clamp screws that are tightened to create a grip on the front and back surfaces of the lower end of the monitor:

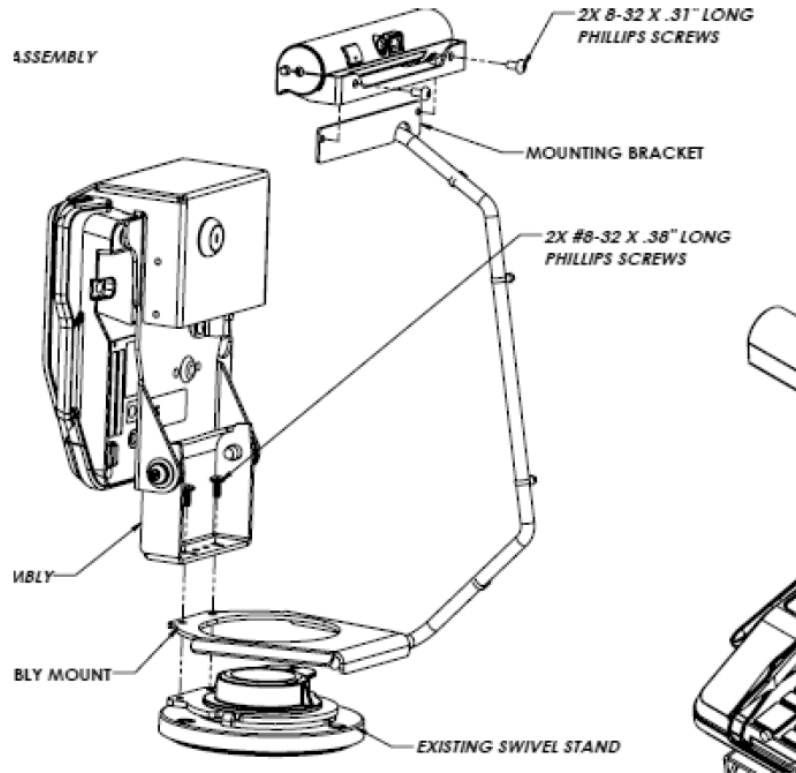


The UV CLEAN Surface Mount (pictured below) may be installed by placing a small stand between the lamp head and the main bracket and then connecting the main bracket to the stand with screws:



In the UV CLEAN Payment Terminal (pictured below), the lamp head and main bracket assembly are installed to a mounting bracket with two screws. The mounting bracket is

permanently affixed by welding to the support rod, which is in turn welded to the light assembly mount. Screws connect the payment assembly and the light assembly mount to an existing swivel stand, which is part of the payment terminal.



In addition to the physical differences in the structure of the products illustrated in the ‘652 and ‘624 Patents and the accused products, there are also differences in the light sensor technology used in each product. The ‘652 Patent refers to active infrared sensors, which emit infrared radiation to detect the presence of objects. One type of active infrared sensor emits a light beam and detects the amount reflected back using a reflector. If the beam is reflected back to the sensor, this means no object—like a human hand—is present to block it. If the beam is not reflected back to the sensor, that could mean an object is present blocking the beam. Other kinds of active infrared sensors include “through-beam,” “diffuse,” and “distance” sensors.

Proximity’s accused products use only “passive infrared sensors,” which means they do not radiate or emit energy to detect the presence of an object. Instead, the passive infrared sensors detect background infrared radiation emitted or reflected from an object—like a human hand—in the vicinity of the sensor. For example, if the UV-Clean lamp is placed over a keyboard, the sensor on the lamp will detect the ambient background radiation from the keyboard, the desk, and surrounding area. If person’s hand is within the detection range of the sensor, the sensor will detect the additional infrared energy (heat) emitted from the hand. In response to the change in heat level, the lamp is programmed to be turned off.

The parties’ competing claim constructions are examined below.

## **II. The Legal Standards**

### **A. Claim Construction**

The “claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Claim terms are “generally given their ordinary and customary meaning,” defined as “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312–13 (quoting *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). That person is one who will “read the words used in the patent documents with an understanding of their meaning in the field and knowledge of any special meaning and usage in the field.” *Id.* at 1313 (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)); see also *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d

1313, 1319 (Fed. Cir. 2005) (cautioning courts not to interpret claim terms “in a vacuum” (quotation omitted)).

Claim construction begins with the claim language. *Aptalis Pharmatech, Inc. v. Apotex Inc.*, No. 2017-1344, 2018 WL 286123, at \*3 (Fed. Cir. Jan. 4, 2018). The court looks first “to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention,” *Vitronics*, 90 F.3d at 1582, and construes the claim terms in the context of the surrounding claim language. *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.”); accord *Lexion Medical, LLC v. Northgate Techs., Inc.*, 641 F.3d 1352, 1356 (Fed. Cir. 2011). When the words in the context of the surrounding claim language make the ordinary meaning readily apparent, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314.

If the “ordinary and customary” meaning is unclear, the court moves from the words in the claims, viewed in context of the patent, to “the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics*, 90 F.3d at 1582. Courts review the “specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.” *Id.* The Federal Circuit has repeatedly stated that “claims ‘must be read in view of the specification, of which they are a part.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996)). The specification, a “concordance for the claims,” *Phillips*, 415 F.3d at 1315 (quoting *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397–98 (Ct. Cl. 1967)), is the “best source for understanding a technical term,” *Phillips*, 415 F.3d at 1315 (quoting

*Multiform Desiccants*, 133 F.3d at 1478).<sup>2</sup> “[T]he specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Phillips*, 415 F.3d at 1316 (citing *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001)); see also *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (claim construction may deviate from the ordinary and customary meaning of a disputed term only if (1) a patentee sets out a definition and acts as his own lexicographer, or (2) the patentee disavows the full scope of a claim term, either in the specification or during prosecution).

“The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Società per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). “There is a fine line between construing the claims in light of the specification and improperly importing a limitation from the specification into the claims.” *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011). Courts must “capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.” *Id.*

“[A] court ‘should also consider the patent’s prosecution history, if it is in evidence.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980); see also *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) (“[T]he specification is the primary source for determining what was invented and what is covered by the claims, elucidated if needed by the

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<sup>2</sup> See also *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004) (“In most cases, the best source for discerning the proper context of claim terms is the patent specification wherein the patent applicant describes the invention.”). When the specification “reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)).

prosecution history.”). The prosecution history “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317 (citing *Vitronics*, 90 F.3d at 1582–83). The prosecution history includes “all express representations made by or on behalf of the applicant to the examiner to induce a patent grant, or . . . to reissue a patent . . . includ[ing] amendments to the claims and arguments made to convince the examiner that the claimed invention meets the statutory requirements of novelty, utility, and nonobviousness.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985); *see also Sanofi-Aventis Deutschland GmbH v. Genentech, Inc.*, 473 F. App’x 885, 888 (Fed. Cir. 2012) (“We have held that an otherwise broadly defined term can be narrowed during prosecution through arguments made to distinguish prior art.”) (citing *Phillips*, 415 F.3d at 1317 (“The prosecution history . . . consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.”)).

“The doctrine of prosecution disclaimer is well established in Supreme Court precedent, precluding patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003); *see also SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1286 (Fed. Cir. 2005). The doctrine applies even if the disclaimers were not necessary to make the invention patentable. *See Uship Intellectual Props., LLC v. United States*, 714 F.3d 1311, 1315 (Fed. Cir. 2013) (“We find no support for [the] proposition that prosecution disclaimer applies only when applicants attempt to overcome a claim rejection. Our cases broadly state that an applicant’s statements to the PTO characterizing its invention may give rise to a prosecution disclaimer.”); *cf. Southwall Techs., Inc.*

*v. Cardinal IG Co.*, 54 F.3d 1570, 1583 (Fed. Cir. 1995) (“Estoppel extends beyond the basis of patentability. . . . Clear assertions made during prosecution in support of patentability, whether or not actually required to secure allowance of the claim, may also create an estoppel.”) (citing *Tex. Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165 (Fed. Cir. 1993)).<sup>3</sup> Prosecution disclaimer does not apply “where the alleged disavowal of claim scope is ambiguous.” *Omega Eng’g*, 334 F.3d at 1324; *see also id.* at 1325 (“[W]e have required the alleged disavowing statements to be both so clear as to show reasonable clarity and deliberateness and so unmistakable as to be unambiguous evidence of disclaimer.”) (citations omitted). Only when “the patentee has unequivocally disavowed a certain meaning to obtain his patent [does] the doctrine of prosecution disclaimer attach[ ] and narrow[ ] the ordinary meaning of the claim congruent with the scope of the surrender.” *Id.* at 1324.

Courts may also “rely on extrinsic evidence, which ‘consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980). Although extrinsic

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<sup>3</sup> “There is a clear line of distinction between using the contents of the prosecution history to reach an understanding about disputed claim language and the doctrine of prosecution history estoppel which ‘estops’ or limits later expansion of the protection accorded by the claim to the patent owner under the doctrine of equivalents when the claims have been purposefully amended or distinguished over relevant prior art to give up scope. . . . [T]he two uses of the prosecution history must not be confused.” *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 862 (Fed. Cir. 1991) (citations and internal quotation marks omitted); *see also Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358–59 (Fed. Cir. 2001) (distinguishing the two); *Spectrum Int’l Corp. v. Sterilite Corp.*, 164 F.3d 1372, 1378 n.2 (Fed. Cir. 1998) (same). “Just as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction.” *Ballard Med. Prods.*, 268 F.3d at 1359 (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998)) (alteration omitted). When the accused infringer argues that the prosecution history results in a narrowing of a claim’s scope, there is no difference, and the Federal Circuit has refused to reverse based on references to estoppel. *See id.* at 1359 (“Because the substance of the district court’s analysis was sound, we disregard the fact that the court used the term ‘prosecution history estoppel’ in an unconventional manner.”); *Biodex Corp.*, 946 F.2d at 862–63 (observing that “Biodex is technically correct in asserting that the doctrine of prosecution history estoppel is ‘irrelevant’ to determination of literal claim scope” but upholding the district court because prosecution history is relevant to claim interpretation) (citation omitted).



evidence “‘can shed useful light on the relevant art,’ it is ‘less significant than the intrinsic record in determining the legally operative meaning of claim language.’” *Zircon Corp. v. Stanley Black & Decker, Inc.*, 452 F. App’x 966, 972–73 (Fed. Cir. 2011) (quoting *Phillips*, 415 F.3d at 1317). Extrinsic evidence is “in general . . . less reliable than the patent and its prosecution history” because it is “not part of the patent” and was not created in patent prosecution: “extrinsic publications may not be written by or for skilled artisans”; and expert reports and testimony created later, for litigation, may “suffer from bias not present in intrinsic evidence.” *Phillips*, 415 F.3d at 1318. A court must use “sound discretion” in admitting and using extrinsic evidence. *Id.* at 1319; *see also Seattle Box Co. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826 (Fed. Cir. 1984) (“A trial judge has sole discretion to decide whether or not [s]he needs, or even just desires, an expert’s assistance to understand a patent. We will not disturb that discretionary decision except in the clearest case.”).

“[E]xtrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1319. Although a court may consider extrinsic evidence, it must not relegate the intrinsic evidence to a mere “check on the dictionary meaning of a claim term.” *Id.* at 1320–21 (noting that relying on dictionaries “too often” causes “the adoption of a dictionary definition entirely divorced from the context of the written description”). “The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law.” *Id.* at 1324 (citing *Vitronics*, 90 F.3d at 1582).

These claim-construction rules must be applied to the record in this case, including the tutorial counsel jointly provided the court, the arguments counsel presented during the *Markman* hearing, and the documents admitted into evidence.

**B. Indefiniteness**

Under 35 U.S.C. § 112(2), a patent “specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor . . . regards as the invention.” The Federal Circuit has explained:

The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe. That determination requires a construction of the claims according to the familiar canons of claim construction.

*Oakley, Inc. v. Sunglass Hut Int’l*, 316 F.3d 1331, 1340 (Fed. Cir. 2003) (citing *All Dental Prodx, LLC v. Advantage Dental Prods.*, 309 F.3d 774, 779–80 (Fed. Cir. 2002) (citations omitted)). “One of those canons is that claims are construed as one skilled in the art would understand them in light of the specification of which they are a part.” *Id.* at 1340–41 (citing *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1575 (Fed. Cir. 1986)).

Claim indefiniteness is a legal determination for a court performing its duty as the “construer of patent claims.” *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1328 (Fed.Cir. 2008) (citing *Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 705 (Fed. Cir. 1998)). Because an issued patent comes with a statutory presumption of validity under 35 U.S.C. § 282, “an alleged infringer who raises invalidity as an affirmative defense has the ultimate burden of persuasion to prove invalidity by clear and convincing evidence, as well as the initial burden of going forward with evidence to support its invalidity allegation.” *Titan Tire*

*Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009) (citing *Tech. Licensing Corp.*, 545 F.3d at 1327).

### **C. Means-Plus-Function**

Section 112(f) provides that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112(f). A means-plus-function claim format allows a patentee to “describe an element of his invention by the result accomplished or the function served, rather than describing the item or element to be used.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 27 (1997). A patentee’s use of the word “means” in a claim element that recites a function creates a presumption that the element is drafted in means-plus-function format. *Id.*; *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1259 (Fed. Cir. 2008). This presumption can be rebutted if the claim itself recites sufficient structure to accomplish the functions identified in the claim. *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed. Cir. 2008); *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1360 (Fed. Cir. 2004).

“Sufficient structure exists when the claim language specifies the exact structure that performs the functions in question without need to resort to other portions of the specification or extrinsic evidence for an adequate understanding of the structure.” *TriMed*, 514 F.3d at 1259–60. If means-plus-function analysis applies, a court must first determine what the claimed function is and then determine the corresponding structures disclosed in the specification that perform that function. *Welker Bearing*, 550 F.3d at 1097; *Minks v. Polaris Indus., Inc.*, 546 F.3d 1364, 1377 (Fed. Cir. 2008); *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1208 (Fed. Cir. 2002).

“Structure disclosed in the specification qualifies as corresponding structure if the intrinsic evidence clearly links or associates that structure to the function recited in the claim.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015). Whether the written description adequately sets forth structure corresponding to the claimed function must be considered from the perspective of a person skilled in the art. *Intel Corp. v. Via Techs.*, 319 F.3d 1357, 1365–66 (Fed. Cir. 2003) (citing *Budde v. Harley–Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed. Cir. 2001)). The question is not whether one of skill in the art would be capable of implementing a structure to perform the function, but whether that person would understand the written description itself to disclose such a structure. *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 953 (Fed. Cir. 2007) (citing *Med. Instr. & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1212 (Fed. Cir. 2003)). “[A] challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function.” *Budde*, 250 F.3d at 1376–77.

### **III. Claim Construction**

There are 37 disputed terms across the two patents. (Docket Entry No. 55-1). The parties disagree as to 9 terms in the ‘652 Patent and 28 terms in the ‘624 Patent.<sup>4</sup> These 37 disputed terms fall into 12 categories.

UV Partners submits that the person of ordinary skill in the art, whose perspective is used to construe the disputed terms, is a person with at least an undergraduate degree in mechanical or electrical engineering and at least two years of demonstrated real-world experience in the field of UV disinfection systems, with knowledge of their integration into other systems. UV Partners has

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<sup>4</sup> Note that the parties identify 29 terms in the claim construction chart for the ‘624 Patent, but the following term appears to have been repeated: “first and second couplers cooperate to removably couple.”

submitted the testimony of Mr. John Ashley as a person with these qualifications. (Docket Entry No. 33-3). Proximity does not offer a different definition or person. Mr. Ashley’s testimony is included in the court’s consideration.

**A. The ‘652 Patent**

The parties disagree on 9 terms in the ‘652 Patent. Several of the terms are repeated throughout the claims. The disputed terms are set out in bold, and the underlined portions show additional disagreements over words or phrases within the disputed terms.

1. A germicidal system for use in disinfecting a human interface device comprising:

a housing defining an aperture;

an ultra-violet (UV) light source at least partially enclosed in the housing and configured to project an illumination pattern;

an **attachment device** extending from the housing; and a sensor coupled to the housing

wherein the attachment device is **configured to removably attach to a separate human interface device** for disinfecting a touch surface of the human interface device,<sup>5</sup> and wherein when the **attachment device is attached to the human interface device**, the **illumination pattern substantially corresponds to the touch surface**,

wherein the sensor is **configured to measure movement of the attachment device relative to the human interface device** and to turn the UV light source from on to off when a **predetermined movement is measured**.

2. The system of claim 1, wherein the sensor is configured to measure an orientation of the **attachment device** and to turn the UV light source from on to off when a predetermined orientation is measured.

...

5. The system of claim 1, further comprising an infrared transmitter and an infrared receiver, wherein the infrared receiver is configured to receive infrared light from the infrared transmitter and wherein if **substantially all of the infrared light transmitted** is

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<sup>5</sup> The parties agree that “disinfecting a touch surface of the human interface device” means “disinfecting the touch surface of the same human interface device to which the light is attached.” (Docket Entry No. 37-1).

not received by the infrared receiver, the system is configured to turn the UV light source from on to off.

6. A germicidal system for use in disinfecting a human interface device comprising:

a housing defining an aperture;

an ultra-violet (UV) light source at least partially enclosed in the housing and configured to project a UV illumination pattern;

an alignment light source coupled to the housing and configured to project an alignment illumination pattern at least partially overlapping the UV illumination pattern;

an **attachment device** extending from the housing; and a sensor coupled to housing,

wherein the attachment device is **configured to removably attach to a separate human interface device** for disinfecting a touch surface of the human interface device, and wherein the attachment device is attached to the human interface device, the alignment illumination pattern and the UV **illumination pattern substantially corresponds to the touch surface**,

wherein the sensor is configured to detect motion in a monitored area, wherein the monitored area is greater than the touch surface, and to turn the UV light source from on to off when motion is detected, and wherein the sensor is configured to function in conjunction with the human interface device to detect activation of the human interface device to turn the UV light source from on to off when activation is detected.

...

10. The system of claim 6, further comprising an infrared transmitter and an infrared receiver wherein the infrared receiver is configured to receive infrared light from the infrared transmitter and wherein if **substantially all of the infrared light transmitted** is not received by the infrared receiver, the system is configured to turn the UV light source from on to off.

(Docket Entry No. 20-4 at 52; Docket Entry No. 37-1; Docket Entry No. 55-1).

Nos. 1, 2, 3, 4, 5. **attachment device; attachment device extending from the housing; attachment device is attached to the human interface device; removably attach; configured to removably attach to a separate human interface device**

UV Partners and Proximity dispute five different terms involving variations of the word “attach.” These terms include: (1) attachment device; (2) attachment device extending from the housing; (3) attachment device is attached to the human interface device; (4) removably attach; and (5) configured to removably attach to a separate human interface device.

The disputes over these terms all arise from Proximity’s argument that they should be construed to emphasize the portable nature of the claimed device. For example, Proximity argues that “attachment device”—the device used to attach the UV disinfecting light claimed in the patent to the object with a touch surface to be disinfected—is properly construed as a device that can easily and instantly be temporarily attached to, and then removed from the object with the touch surface. Proximity asks the court to include in the definition that the “attachment device” must be quickly and easily attached or removed, without the need for tools or assembly, and with so little work as to involve no delay. UV Partners in turn argues that the limitations Proximity calls for are not all supported by the claim language, specification, or prosecution history, and are unnecessary.

The heart of the dispute is how to construe “attachment device” or “removably attach,” a task complicated by the fact that the word “removably” is not, and should not be, found in proper or customary English.

UV Partners argues that the ordinary meaning of “attachment device” as understood by a person of ordinary skill in the art is “a device configured to be fastened or joined to one or more objects.” UV Partners argues that the ordinary meaning of “removably attach” is to “removably fasten or join.” UV Partners relies on other claim language to support its construction. For example, Claim 1 describes the attachment device as something “extending from the [UV light source housing]” and “configured to removably attach to a separate human interface device.”

(Docket Entry No. 20-4 at 52). Claim 2 envisions the attachment device as having various orientations, with sensors that can adjust to the different orientations and change the UV light pattern in response. (*Id.*). Attachment devices are pictured at **110** in the specification figures below. They are shown as configured to be attached to one or more objects:

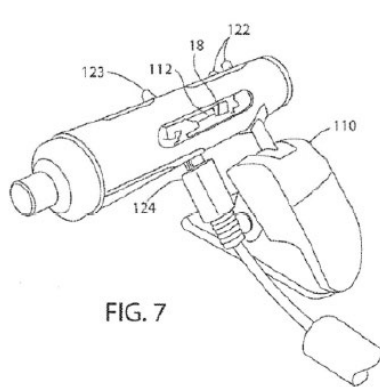


FIG. 7

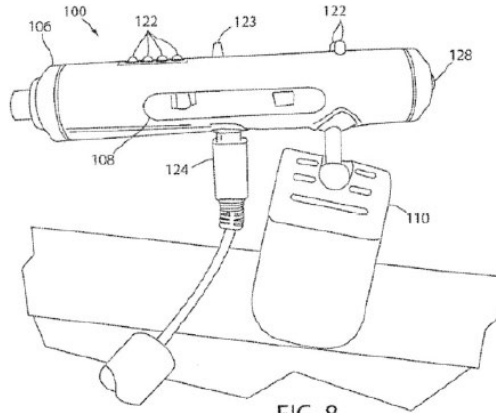


FIG. 8

(*Id.* at 9, 44).

“Removably attach” is used in reference to the attachment devices being “configured to removably attach to the human interface device.” (*Id.* at 52). The specification also uses “removably attached” in describing the receptacle housing **5117** of Figure 51 (pictured below) as “removably attached to an outer surface of a personal computer (PC) or tablet for enabling the shade **5101** to extend over the PC’s liquid crystal display (LCD).” (*Id.* at 50).

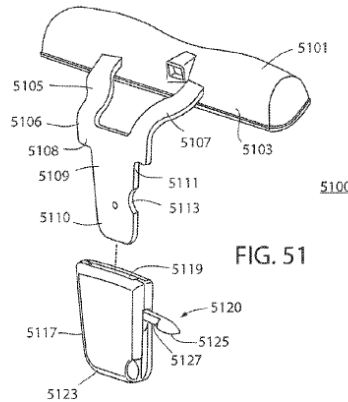


FIG. 51



(*Id.* at 38). The specification states that “the inside surface of the receptacle housing **5117** may include a double sided tape, hook and/loop fastener or the like that can enable the inside surface **5120** to stick, adhere and/or be mechanically fastened to a portion of an outside surface housing or case that protects the LCD of a personal computer.” (*Id.* at 51).

In response to UV Partners’s arguments, Proximity argues that “attachment device” is a means-plus-function format. Section 112(f) provides that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112(f). Because “attachment device” is not written in a means-plus-function format, there is a presumption that a means-plus-function construction does not apply. *Diebold Nixdorf, Inc. v. ITC*, 899 F.3d 1291, 1297–98 (Fed. Cir. 2018) (“[T]o determine whether § 112, para. 6 applies to a claim limitation, we first look to whether the limitation uses the word ‘means.’ If so, there is a rebuttable presumption that § 112, para. 6 applies; if not, there is a rebuttable presumption that the provision does not apply.” (citation omitted)). An “attachment device” is a structure, and Proximity has not presented authority, argument, or evidence to sufficiently overcome that presumption.

Proximity next argues that the definition of “attachment device” should be “a mechanical device joining or connecting two pieces or components that can be easily and nearly instantaneously attached or unattached by hand, i.e., without the use of tools or other equipment and without damaging any component of the assembly.” Similarly, Proximity contends that “removably attach” should be interpreted as “connecting two pieces or components that can be easily and nearly instantaneously attached or unattached by hand, i.e., without the use of tools or

other equipment and without damaging any component of the assembly.” Proximity’s argument is essentially that because the claimed invention is a portable device that can be moved from one machine or device or structure to another to disinfect surfaces on each, the definition of “attachment device” or “removably attach” must emphasize the easy, speed, and temporary nature of the attachment to and detachment from one surface or device and the reattachment on another surface or device. Proximity points to the following intrinsic evidence—the claims, the specification, and the prosecution history—to support its claim construction.

- In its claim construction brief, UV Partners describes the invention under the patents as a “portable” UV light. (Docket Entry No. 33 at 5).
- In the abstract of the common specification of both patents, the invention is described as “[a] portable light fastening assembly for use with the human interface of an electronic device . . . .” (Docket Entry Nos. 20-3, 20-4, cover page).
- The background section of both patents states, “[p]ortable lighting can be used with electronic devices to illuminate various areas of the device” and that “having specialized lighting permanently mounted to the electronic device can be a burden to the user for purposes of mobility, storage, and/or servicing.” (Docket Entry Nos. 20-3, 20-4, col. 1).
- Both patents state, in the field of invention section, that the “present invention relates generally to portable lighting and more specifically to a fastening assembly used with a portable light allowing the light to be easily disconnect [*sic*] the portable light from an electronic device.” (Docket Entry Nos. 20-3, 20-4, col. 1).
- The prosecution history shows that the certain claims in the ‘624 Patent were initially rejected because they would claim an invention broader than an invention already anticipated in “*Bettles et al* (U.S. Patent Application Publication Number 20140183377).” (Docket Entry No. 34-3 at 5–6). The U.S. Patent Examiner found that *Bettles* taught a similar portable light assembly wherein the receptacle housing could be fixedly attached to the electronic device. The examiner rejected previous ‘624 claims because *Bettles* taught attachment members in which the attachment member was snapped to the electronic device, fit securely around the device, or could have included adhesives for more permanent attachment. UV Partners was able to later distinguish its patent from *Bettles* due to its differing structural features; however, Proximity relies on the *Bettles* history to show that the U.S. Patent Examiner and the patentee understood that they were communicating about various portable assemblies. (Docket Entry Nos. 34-3, 34-4, 34-6).

- The patentee also cited *Loutitt*, WO 2011/033262, which is also a UV disinfection lamp; however, the patentee distinguished from *Loutitt*, which does not involve a portable assembly.



(Docket Entry No. 34-8). As Proximity notes, the reason that the ‘652 and ‘624 patents are not obvious over *Loutitt* is because:

the *Loutitt* [Germ Genie] lamp housing is not “removably attached” because it does not have a support arm [engagement member] that slides into a receptacle housing that is attached to some other object. The lamp housing/hood of the *Loutitt* lamp [Germ Genie] is fixedly attached to the support column and the support column is fixedly attached to the base. Nor is the Germ Genie clipped to another object. Therefore, it is not a “portable” lamp assembly.

(Docket Entry No. 34 at 15–16).

Proximity’s construction requires an attachment device and attachment process that is more limited than what UV Partners proposes. Proximity would add: (1) easily done; (2) nearly instantaneously; and (3) by hand, as limits on the attachment device and to the attachment process claimed in the UV Partners Patent. As UV Partners notes, some of these are subjective qualifiers that depend on the user’s capabilities.

The parties do not dispute that the claims, specification, and prosecution history show that the patent is for a portable device. The claim language describes an “attachment device” that “removably attaches,” emphasizing the portable nature that enables the device to be attached to one object with a surface to be disinfected, then detached from that object, and then moved to and attached to another object with a surface to be disinfected. The specification uses the word “portable,” and the figures show a receptacle housing that can be attached to a human interface device using tape with an engagement member that can move from the receptacle housing on one device to the receptacle housing on another. The specification references tape, clips, or adhesive material as examples of attachment methods lending further support that the claimed device is made to be portable, and not to be permanently joined or affixed to the surface containing the area to be disinfected, or that the assembly is made to be a fixed assembly in of itself. *See, e.g., Phillips*, 415 F.3d at 1323 (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.”). The prosecution history distinguished UV Partners’s devices from those that were more permanent, fixed structures or which could not be moved from one surface to another using a receptacle housing.

“Attachment device” must be construed to exclude a device that permanently joins or affixes the device to the object with the surface to be disinfected and must be construed to include a device that makes the UV light assembly portable. *See Ottah v. Fiat Chrysler*, 884 F.3d 1135, 1137, 1140 (Fed. Cir. 2018) (in a case involving a patent that described an invention for a “a removable book holder assembly for use by a person in a protective or mobile structure such as a car seat, wheelchair, walker, or stroller,” the court held that because the accused products used

“fixed mounts” that required tools for removal, these products were outside the invention, which did not include fixed mounts).

After discussing the evidence supporting the portable nature of the patented device at the claim construction hearing with the parties, the court suggested the following construction: “a device configured to be readily fastened or joined to, or removed from, one or more objects without changing or intruding into that object or objects.” After further examination, the court concludes that this definition can be clarified and simplified.

The court construes the term “**attachment device**” to mean “**a device configured to be readily fastened or joined to, and readily removed or separated from, one or more objects.**” Because all claims in the ‘652 Patent include or depend on the term “attachment device,” the court need not separately construe the four other related terms that include variations of the word “attach.”

#### **No. 6. illumination pattern substantially corresponds to the touch surface**

Claims 1 and 6 of the ‘652 Patent recite a UV light source that projects an “illumination pattern [that] substantially corresponds to the touch surface.” (Docket Entry No. 20-4 at 52). Proximity disputes the construction of “substantially corresponds” within this term, arguing that the illumination pattern must be construed as having approximately the same shape and size as the touch surface it is disinfecting. This construction would not require a perfect alignment between the light pattern and the touch surface it illuminates, but would require the light pattern and the surface to be of a similar size and shape. By contrast, UV Partners construes “substantially corresponds” as “generally covers,” and argues that Proximity’s definition improperly imports limitations from the specification. UV Partners also submits expert testimony that supports its proposal, arguing in part that “a person of skill in the art would understand that some amount of

UV illumination beyond the strict outer dimensions of a touch surface are desired as a margin of error for ensuring the disinfection of touch surfaces that might be slightly askew or misaligned.” (Docket Entry No. 33-3 at 16–18).

The construction Proximity proposes is not supported by the record. The claims and specifications, as discussed previously, describe a portable device with a UV light source that can be moved among various devices. In the ‘652 Patent, the same UV light source is shown disinfecting the laptop keyboard **5003** of Figure 50 and the desktop keyboard **5501** and mouse **5303** of Figure 55.

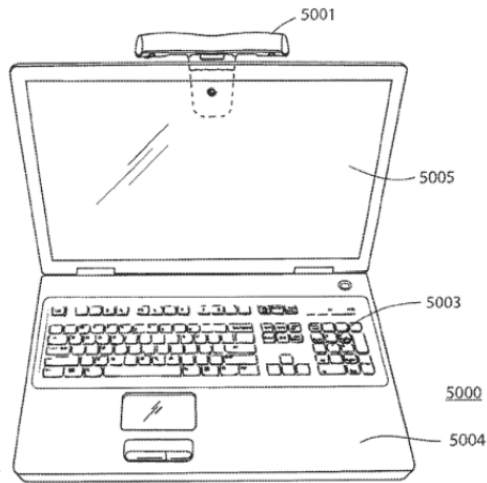


FIG. 50

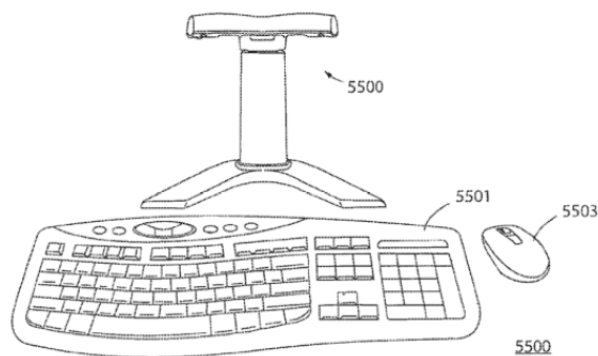


FIG. 55

(*Id.* at 37, 39).

Claims 1 and 6 do not say that the disinfecting UV light illumination pattern must approximately correspond in size and shape to the area of the touch surface the UV light illuminates in order to disinfect. The sentences of Claim 1 leading up to this disputed term discuss the ability of the device to be attached to, and removed from, the object with the surface to be disinfected. Varying objects and surfaces are shown in the figures. Although “substantially” is not typically synonymous with “generally,” a patentee may use terms in a manner different from

their ordinary meaning. *Hormone Rsch. Found. v. Genentech, Inc.*, 904 F.2d 1558, 1563 (Fed. Cir. 1990) (“It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings.” (citations omitted)). This different meaning must, however, be supported in the patent specification or file history. *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996).

Proximity’s proposed definition would require the light illumination pattern to be approximately the same size and shape as each different touch surface to be disinfected. A payment terminal, a keyboard, and a mouse are all touch surfaces, with very different shapes and sizes. Imposing the size and shape limitation on the light pattern that Proximity suggests would be inconsistent with the portable nature of the patented device, which can be moved readily from disinfecting a keyboard, to a mouse to a payment terminal, as evidenced by the claim language and specification. But UV Partners’s suggestion that the court construe the term to mean “generally covers” is vague, not expressly supported by the specification, and, as pointed out by Proximity’s counsel at the *Markman* hearing, could result in the patented invention claiming a device with light sources that cover a much greater area than the touch surfaces the device is meant to disinfect.

The court suggested at the *Markman* hearing that it construe the disputed term as “the light output covers substantially the same area as the touch surface.” Proximity continued to insist on a strict correspondence between the light output shape and the touch surface shape, without providing a persuasive explanation as to why “substantially covers” must be “covers the same size and shape.” The court construes “**illumination pattern [that] substantially corresponds to the**

**touch surface” to mean “the light output that covers substantially the same area as the touch surface.”**

**Nos. 7, 8. configured to measure movement of the attachment device relative to the human interface device; predetermined movement is measured**

The parties dispute two different terms that use the word “measure.” Claim 1 recites in relevant part a germicidal system “wherein the sensor is configured to **measure** movement of the attachment device relative to the human interface device and to turn the UV light source from on to off when a predetermined movement is **measured**.” (Docket Entry No. 20-4 at 52).

Proximity argues that “measure” is a specific “quantitative determination” that the claimed device must make. Proximity argues that Claim 1 requires the sensor to measure the amount of movement in the position of the device relative to the object it is to disinfect, and to deactivate the device when the amount exceeds a preset level. Proximity argues that “measure” does not mean merely detecting whether a certain threshold level of relative position change is exceeded, but means determining the amount of change that is present. UV Partners argues that “measure” means simply to detect that the device or the object has been moved in relationship to the other beyond a preset amount, not to precisely measure what that amount of movement is. Proximity argues that the sensor must be able to identify the amount of relative change in position. UV Partners argues that the sensor need only decide when the amount of movement exceeds a certain level, which can be set as a factory default or changed by the subsequent user.

The court agrees with UV Partners that “measure” does not require identifying precisely how much change or movement is present, as opposed to identifying that a threshold amount is present. Claim 1 explains that the sensor “measures” movement of the disinfecting device “relative to the human interface device.” The need for determining whether there is a change between the



position of the source of the light beam and the surface it is to illuminate is clear; the need for a number identifying the precise amount of that relative change in position—the amount of movement—is not. The claim language supports construing “measure” as “detect.” Additionally, the term “predetermined movement is measured,” already indicates that there is a “preset” amount of movement that is programmed, and no further limitation needs to be transplanted into the word “measured.”

The specification language also supports this construction. The specification describes “measurements” besides quantitative determinations. The specification states that “[a]ccording to one embodiment, the germicidal system **100** can include an auto disabling device, such that if the adjustable device **119** is altered beyond predetermined angles of any axis and/or quick movement (e.g. accelerometer), the UV light source **12** can be turned OFF.” (Docket Entry No. 20-4 at 46). This is consistent with construing “measure” as detecting whether there is a preset amount of change between the position of the device and the surface it is disinfecting. Figure 25 (pictured below) uses the words “motion detected” twice, and Figure 26 (pictured below) uses the word “senses,” which is consistent with defining “measure” as “detect.”

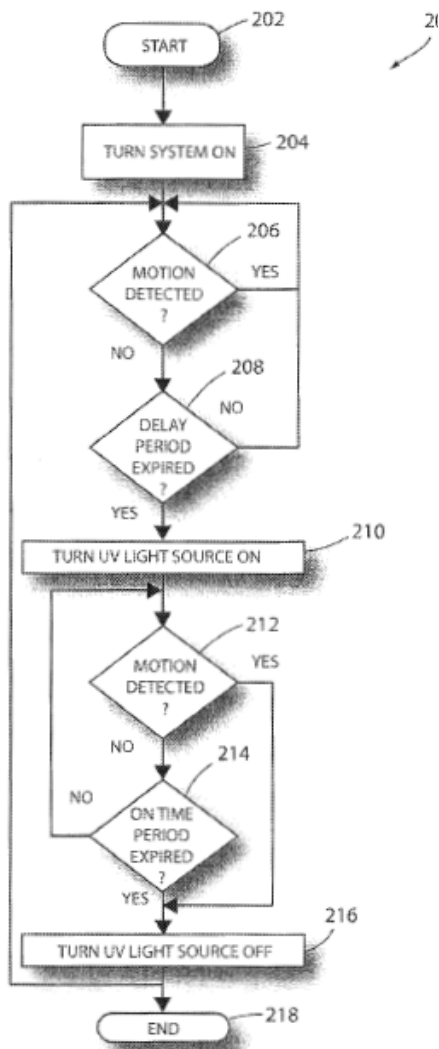


FIG. 25

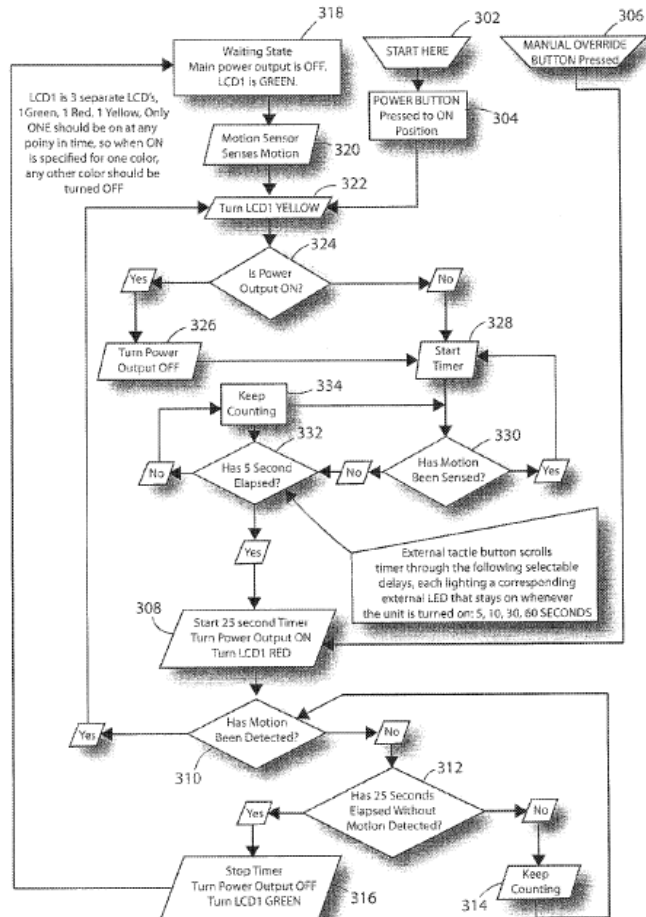


FIG. 26

(*Id.* at 18–19).

The court construes “configured to measure movement of the attachment device relative to the human interface device” to mean “structured, arranged, or designed to detect movement of the attachment device in its position relative to the position of the human interface device.” The court construes “predetermined movement is measured” to mean that a “threshold amount of movement of the attachment device is detected.”

No. 9. substantially all of the infrared light transmitted

Dependent Claims 5 and 10 of the ‘652 Patent recite the “system of [Claims 1 and 6], further comprising an infrared transmitter and an infrared receiver, wherein the infrared receiver is configured to receive infrared light from the infrared transmitter and wherein if substantially all of the infrared light transmitted is not received by the infrared receiver, the system is configured to turn the UV light source from on to off.” (Docket Entry No. 20-4 at 52). The claimed system would, for example, enable the UV ray transmission to deactivate if a physical intrusion—such as a hand—entered the area covered by the rays and blocked a certain amount of light from being sent or received. UV Partners argues that the term “substantially all of the infrared light transmitted” means “nearly all of the detectable amount of transmitted infrared light.” Proximity argues that the term means that “nearly all infrared radiation transmitted is reflected back and received by the sensor without any significant scattering or absorption.”

The point of this dispute is lost on the court. It also appears lost on the parties. Despite indicating that this claim was still disputed in the post-*Markman* hearing claim chart, both counsel for Proximity, Mr. Anderson, and the counsel for UV Partners, Mr. Azzi, agreed that no construction was necessary and did not present any continuing objection. The relevant portion of the hearing transcript is set out below:

THE COURT: . . . All right. So, let’s go to Claim 5, substantially all of the infrared light transmitted. The dispute here seems to be that Proximity wants the light to be reflected back and adds in language that it be received back without significant scattering or absorption and –

MR. ANDERSON: This one --

THE COURT: Go ahead.

MR. ANDERSON: This one I might just -- maybe Mr. Azzi and I can just agree.

THE COURT: Nearly all of the detectible amount of transmitted infrared light?

MR. ANDERSON: Right. They made a point in the briefing that -- you know, my argument was, well, if a substantial amount is reflected off or absorbed, then you're not getting all of it back.

THE COURT: Right.

MR. ANDERSON: They said, "Well, it may not be reflected." Maybe they have a point there. I'm not sure about that. Maybe we should just leave this --Is this one that we needed to have construed, Mike? What do you think?

MR. AZZI: I thought it was fine, plain and ordinary without construction. I'm fine with that.

MR. ANDERSON: Let's do that.

MR. AZZI: Okay.

THE COURT: Okay. So, we'll just leave it at substantially all of the infrared light transmitted and not construe it?

MR. ANDERSON: I think that's fine.

MR. AZZI: That's fine, yeah.

THE COURT: All right. It's no longer disputed?

MR. AZZI: Correct.

THE COURT: Good.

(Docket Entry No. 52 at 59–61).

## **B. The '624 Patent**

The parties disagree about 28 terms in the '624 Patent, several of which are disputed terms in the '652 Patent. The disputed terms are set out in bold, and the underlined portions show additional disagreements over words or phrases within the disputed terms.

### **1. A portable light fastening assembly** comprising:

a lamp housing;

an **attachment device** extending from the lamp housing **configured to removably affix** the portable light fastening assembly to at least one of a table stand and a monitor;

an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and

wherein the attachment device includes a **support member** and a **paired engagement member** and **receptacle housing**;

wherein the engagement member is **configured to be removably fastened within the receptacle housing for removably affixing** the portable light fastening assembly to at least one of a table stand and a monitor.

2. The portable light fastening assembly of claim 1, wherein **attachment device** holds the lamp housing in a fixed position.

3. The portable light fastening assembly of claim 1 wherein the **receptacle housing** includes a **mounting surface** for mounting the portable light fastening assembly to the at least one of the table stand and the monitor.

4. The portable light fastening assembly of claim 3 wherein the **mounting surface** is configured to be attached using an adhesive.

5. The portable light fastening assembly of claim 1, wherein the **attachment device** includes a pair of **support members**.

6. The portable light fastening assembly of claim 1, wherein a portion of the **attachment device** is integrated with a table stand.

7. The portable light fastening assembly of claim 1, wherein the lamp housing includes a shade and the **support member** is integrally connected to the rear of the shade.

8. The portable light fastening assembly of claim 1, wherein the **attachment device** enables use of the portable light fastening assembly at another location.

9. A portable light fastening assembly comprising:

a lamp housing **configured to removably affix** to at least one of an electronic device and a table stand;

an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and

an **attachment device** extending from the lamp housing, wherein the attachment device includes a **support member** and a **first coupler** and wherein the attachment

device is **configured to removably affix** the **portable light fastening assembly** to at least one of a table stand and a monitor;

a **second coupler** joined to at least one of an electronic device and a table stand;

wherein the **first and second couplers cooperate to removably couple** the lamp housing to at least one of the electronic device and the table stand.

10. The **portable light fastening assembly** of claim 9, wherein **attachment device holds the lamp housing in a fixed position.**

11. The **portable light fastening assembly** of claim 9, wherein the **second coupler** includes a **mounting surface for mounting** to the at least one of the electronic device and the table stand.

12. The **portable light fastening assembly** of claim 11 wherein the **mounting surface is configured to be attached using an adhesive.**

13. The **portable light fastening assembly** of claim 9, wherein the **attachment device** includes a **pair of support members.**

14. The **portable light fastening assembly** of claim 9, wherein a **portion of the attachment device** is integrated with a table stand.

15. The **portable light fastening assembly** of claim 9, wherein the lamp housing includes a shade and the **support member is integrally connected to the rear of the shade.**

16. The **portable light fastening assembly** of claim 9, including a **third coupler** joined to at least one of an electronic device and a table stand, wherein the **first and third couplers cooperate to removably couple** the lamp housing to at least one of the electronic device and the table stand joined to the third coupler, whereby the portable light fastening assembly is **configured to be selectively and removably coupleable to the second coupler and the third coupler.**

(Docket Entry No. 20-3 at 49; Docket Entry No. 37-1; Docket Entry No. 55-1).

Nos. 1, 8, 9, 11, 12, 13, 17, 27, 28. **portable light fastening assembly; attachment device extending from the lamp housing; attachment device; configured to removably affix; configured to removably affix the portable light fastening assembly; removably affixing; configured to be removably fastened; configured to be removably fastened within the receptacle housing for removably affixing the portable light fastening system; attachment device enables use of the portable light fastening assembly at another location**

The terms “portable light fastening assembly” and “attachment device” in the ‘624 Patent are similar to the terms “attachment device” and “removably attach” in the ‘652 Patent. Proximity proposes a claim construction emphasizing the portable aspect of the claimed invention and excluding the kinds of permanent fixtures that require labor-intensive attachment. Because the specification language and prosecution history are similar to or the same as that of the ‘652 Patent, the court again agrees with Proximity that some limit is needed to reflect the difference between a portable UV light device and a more permanent or fixed light device.

UV Partners argues that the ordinary meaning of portable light fastening assembly is a “readily movable light assembly that can be attached to another object.” (Docket Entry No. 37-1). Proximity proposes that the definition be “[a] device where the lamp can be attached and removed by hand nearly instantaneously, and without the use of tools or other equipment and without damaging any part of the device.” (*Id.*).

The term “portable light fastening assembly” in the ‘624 Patent should be construed similarly to the term “attachment device” in the ‘652 Patent. The parties agreed at the *Markman* hearing that these terms should be construed consistently. (Docket Entry No. 52 at 61–62). The court construes **“portable light fastening assembly”** to mean **“a light assembly that can be readily fastened or joined to, and then readily removed or separated from, one or more objects.”**

Because all claims in the ‘624 Patent include or depend on the term “portable light fastening assembly,” and this construction resolves the dispute between the parties that the claimed invention be construed to reflect its portable nature, the court need not construe the remaining term variations, which were also all disputed on the grounds that they did not reflect portability: “attachment device extending from the lamp housing”; “attachment device”; “configured to

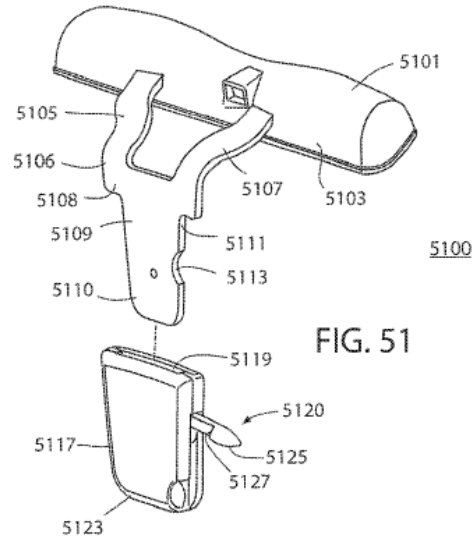
removably affix”; “configured to removably affix the portable light fastening assembly”; “removably affixing”; “configured to be removably fastened”; “configured to be removably fastened within the receptacle housing for removably affixing the portable light fastening system”; “attachment device enables use of the portable light fastening assembly at another location.”

**Nos. 2, 3. support member; pair of support members**

“Support member” or “pair of support members” is repeated throughout the claims. For example, Claim 1 describes “an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and wherein the attachment device includes a support member and a paired engagement member and receptacle housing.” (Docket Entry No. 20-3 at 49). Claim 15 describes a portable light fastening assembly, “wherein the lamp housing includes a shade and the support member is integrally connected to the rear of the shade.” (*Id.*). UV Partners argues a person of ordinary skill in the art would define “support member” to mean a “structural element that supports another object.” (Docket Entry No. 37-1).

UV Partners points to language in the specification to support its construction. The specification describes Figure 51 (pictured below), which includes a “plurality of support members **5105, 5107** attach[ed] to the rear portions of the shade **5101**,” and provides that the support members can “form a gap and/or a space,” which “creates an attractive appearance and reduces the overall weight of the portable light fastening assembly **5100**.” (Docket Entry No. 20-3 at 47).





UV Partners also submits extrinsic expert evidence from a person of ordinary skill in the art, Mr. Ashley, that “support” means “bear all or part of the weight of; hold up,” and “member” means “a constituent piece of a complex structure.” (Docket Entry No. 33-3 at ¶ 55).

Proximity argues that support member is a means-plus-function term, and as a result, the definition must be limited to “the elongated pieces that connect the light housing as shown by Figure 51,” pictured as **5105** and **5107**. (Docket Entry No. 37-1). Proximity relies on *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015), for the proposition that “member” is a placeholder and “support” is a word that signals means-plus-function because it means “to support.” The issue in *Williamson* was a patent for methods and systems of distributed learning. The invention claimed three main components: (1) a presenter computer; (2) audience member computers; and (3) a distributed learning server. *Id.* at 1343. The district court construed the term “distributed learning control module” as a means-plus-function term. *Id.* at 1350–51. The Federal Circuit clarified that the failure to use the word “means” in the claim creates a rebuttable presumption that § 112 does not apply. The standard “is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* at 1349.

Turning to the claim language in *Williamson*, the Federal Circuit noted that the disputed term in the broader context of the claim was in traditional means-plus-function format because the entire passage provided a “distributed learning control module *for* receiving communications transmitted between the presenter and the audience member computer systems and *for* relaying the communications to an intended receiving computer system and *for* coordinating the operation of the streaming data module.” *Id.* at 1350 (emphasis added). Although the patent did not use the word “means,” it met the means-plus-function test by describing the functions performed by the “distributed learning control module.” Additionally, the Federal Circuit noted that “module” was a well-known “nonce word,” such as “mechanism, element, and device,” that “reflect[ed] nothing more than verbal constructs” that could be tantamount to using the word “means.” *Id.* As a result, the Federal Circuit held, “distributed learning control module” was a means-plus-function term.

“Support member” is not in means-plus-function format. Proximity has not submitted evidence of what a person of ordinary skill in the art would interpret “support member” to mean. Nor has it pointed to claim or specification language indicating that “support member” is properly viewed as a means-plus-function term. The term “support member” is not like the term “distributed learning control module” at issue in *Williamson*. In that case, the term “distributed learning control module” was used in reference to performing functions in the broader context of the claim. The term “support member” in the ‘624 Patent claims is used to describe a structure, and not to describe performing a function. For example, Claim 15 states that “the support member is integrally connected to the rear of the shade.” This language describes a structure and is not a means-plus-function term.

The court construes the term to have its plain and ordinary meaning: **a structural element that supports another object.**

**Nos. 4, 10. support member is integrally connected to the rear of the shade;  
portion of the attachment device is integrated**

Dependent Claims 7 and 15 describe a “support member” that “is integrally connected to the rear of the shade.” Dependent Claims 6 and 14 describe the attachment device as “integrated” with a table stand. The dispute is over how the court should construe the word “integrally” or “integrated.” UV Partners argues that “integrated” should be construed as “connected as a single assembly.” Proximity argues that “integrally” should be construed as a unified single piece, rather than two separate pieces connected to each other.

The specification uses this language in describing the physical relationship between the support members **4903** and **4905** and the shade **4901** in Figure 49, reproduced below.

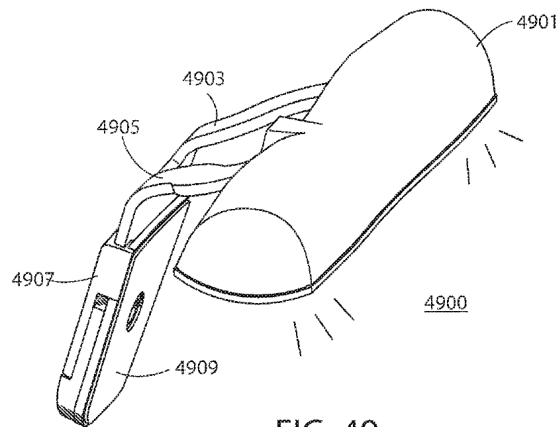


FIG. 49

The specification also uses “integrally” or “integrated” when describing separate components that are connected to form a single assembly. One example includes a USB power cord that is “integrated with” the attachment device. (Docket Entry No. 20-3 at 42). Another example includes a germinal system that is “integrated with” a laptop computer, in which “the UV light source 112 can be integrated at the top of the laptop screen and directed towards the keyboard or touchpad area,” as pictured below in Figure 16. (*Id.* at 44).

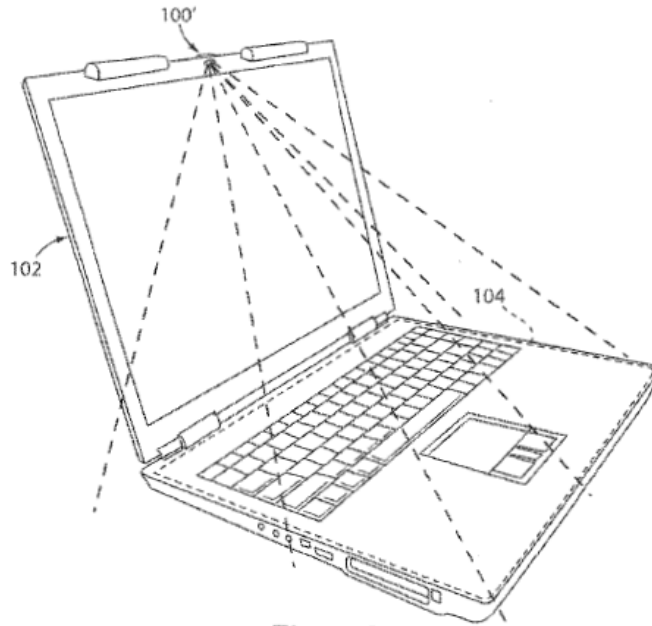


Fig. 16

(*Id.* at 10). UV Partners also cites Mr. Ashley’s expert testimony to support its construction of “integrated” as connected to form a “single assembly.” (Docket Entry No. 33-3 at ¶¶ 59–62). Mr. Ashley reasons that based on the specification’s references to integration in the context of USB cords, systems “integrated with a laptop,” and the support members being integrated with the shade, along with dictionary definitions of “integral,” and “connect,” a person of ordinary skill in the art would understand “integrally connected” to mean “as part of a single assembly.” (*Id.*)

The claim and specification language support UV Partners’s position that “integrally” and “integrated” are properly construed as “connected as a single assembly,” rather than a “unified single piece,” as Proximity would propose. But Proximity argues that adopting the “connected as a single assembly” construction makes dependent Claims 6, 7, 14, 15 invalid as indefinite and unable to be differentiated from independent Claims 1 and 9. But the problem does not appear to be indefiniteness under 35 U.S.C. § 112(2), which requires that a specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the

inventor or a joint inventor regards as the invention.” The court has already concluded that based on the specification, claim language, extrinsic evidence, and arguments presented by UV Partners’s counsel, “integrally” or “integrated” refers to a connection as a part of a single assembly, not a monolithic structure. That is definite.

There is still an issue under 35 U.S.C. § 112(4), which requires that “a claim in dependent form . . . contain a reference to a claim previously set forth and *then specify a further limitation of the subject matter claimed.*” 35 U.S.C. § 112(4) (emphasis added); *see Zircon Corp. v. Stanley Black & Decker, Inc.*, 452 Fed. Appx. 966, 975 (Fed. Cir. Oct. 5, 2011) (recognizing that the failure to read an additional limitation into a dependent claim would make the claim invalid under 35 U.S.C. § 112(4)); *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1362 (Fed. Cir. 2016) (similar). The issue appears to be whether construing “integrally” and “integrated” to mean “connected as a single assembly” makes the dependent claims invalid because they do not state an additional limitation of what is set out in the independent claims.

Claim 1 recites a “portable light fastening assembly comprising: . . . an attachment device extending from the lamp housing configured to removably affix the portable light fastening assembly to at least one of a table stand and a monitor; an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and wherein the attachment device includes a support member and a paired engagement member and receptacle housing . . . .” (Docket Entry No. 20-3 at 49). As Proximity points out, Claim 6, which claims the “portable light fastening assembly of claim 1, wherein a portion of the attachment device is integrated with a table stand,” seems to be superfluous to Claim 1 which already claims “a portable light fastening assembly” that removably affixes to a table stand using an attachment device. And Claim 7, which claims the “portable light fastening assembly of claim 1, wherein the lamp housing includes a shade and the support member

is integrally connected to the rear of the shade,” seems to be no different than Claim 1, which already includes a lamp housing, with an attachment device, and “wherein the attachment device includes a support member.” Although Claim 7 includes the word “shade,” and Claim 1 does not, it is unclear why the ordinary construction of “lamp housing” does not already encompass a shade, or what a shade would add to a housing.

This issue was discussed, but not clarified, at the *Markman* hearing:

MR. ANDERSON: . . . Now, Claim 1, it has a shade and a support member; and they have to be connected because the support member is the thing that supports the shade, or the lamp housing. So, then, the question becomes what does “integrally connected” mean?

THE COURT: Right.

MR. ANDERSON: And if it means once you just hook them together they’re integrally connected, well, that’s exactly what Claim 1 calls for. So, the only way you can get there is to say that it has to be formed of one piece.

. . .

MR. AZZI: Claim 7 -- I want to be very clear. This not only introduces that “integrally connected” term, but there is no -- in Claim 1 there is no mention of a shade. There is a lamp housing, but there is no shade. What Claim 7 does is it says in addition -- your portable light fastening assembly of Claim 1, we’re going to add a shade here; and that shade is integrally connected to the support member. So, the support member is not connected to something else, it’s connected to the shade. So, I think those things can readily be read harmoniously and are not -- it’s not rendering anything superfluous. It’s adding the shade and then explaining that that support member is integrally connected to that shade as opposed to somewhere else on the housing.

THE COURT: All right. Go ahead.

MR. ANDERSON: I don’t understand what could be the difference between the lamp housing and the shade. The shade is the thing that encloses the lamp, which is the lamp housing. So, I mean, I understand what Mr. Azzi is saying; but the lamp housing and the shade are the same thing. Because then, if you define them differently, then what does the support member connect to? It has to hold the light, and the light is encased in the lamp housing, or the

shade. If it's not, it won't hold the light. So, I don't think that's a distinction there. I think it's just another term for lamp housing.

THE COURT: Mr. Azzi, one more response to that.

MR. AZZI: With respect to that, I think we're potentially both, to a certain extent, suffering from having these specific embodiments about the specification and Proximity's products in mind. In those -- in those cases, yes, they are probably coterminous; but they would not have to be; and these claims are not so limited to the specification or that particular embodiment that Proximity has. So, yes, here, they might be close to the same thing; but they would not need to be, depending on the construction.

(Docket Entry No. 52 at 73–75).

The court agrees with Proximity that by adopting UV Partners's proposed construction of “integrally” and “integrated” as “connected as part of a single assembly,” which is the construction supported by the intrinsic and extrinsic evidence, dependent Claims 6, 7, 14, and 15 do not add any further limitation to independent Claims 1 and 9. The failure to articulate a difference between a shade and a lamp housing, and an attachment device “integrated with a table stand” with the claimed attachment device and table stand assembly in Claims 1 and 9 leads to invalidity.

The terms “support member is integrally connected to the rear of the shade” and “portion of the attachment device is integrated” do not add further limitations to independent Claims 1 and 9. Dependent Claims 6, 7, 14, and 15 are invalid under 35 U.S.C. § 112(4).

**Nos. 5, 6. engagement member; a paired engagement member**

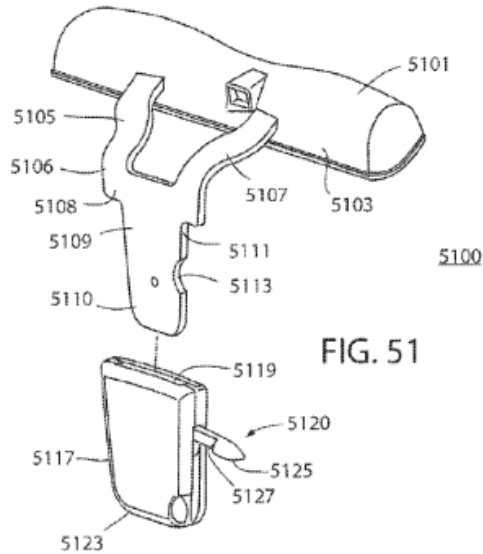
Claim 1 recites a “portable light fastening assembly comprising . . . an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and wherein the attachment device includes a support member and a **paired engagement member** and receptacle housing; wherein the **engagement member** is configured to be removably fastened within the receptacle housing

for removably affixing the portable light fastening assembly to at least one of a table stand and a monitor.” (Docket Entry No. 20-3 at 29).

UV Partners argues that “engagement member” should be construed as a “structural element that interfaces with another object.” (Docket Entry No. 37-1). Proximity argues that “engagement member” does not sufficiently define a structure; the word “member” is a placeholder word having no definite structure; and a means-plus-function analysis is required. If determined to be a means-plus-function term, “engagement member” would be limited to the structure disclosed in the specification for Claim 1, which is “the lower portion of the support member, shaped and sized to fit into the receptacle housing such that the size and shape of the engagement member substantially matches the internal size and shape of the receptacle housing, allowing the support member to be snugly held in place.” (Docket Entry No. 37-1).

The claim language describes the engagement member as “removably fastened within” the receptacle housing. The engagement member essentially plugs in and out to various receptacle housings to allow for the UV light lamp in Claim 1 to be disengaged and transported to another location or device. The specification supports this. It describes an engagement member **5109** in connection with Figure 51 below.





The engagement member **5109** includes “an upper section **5108** that extends into a tapered body portion **5110**.” (Docket Entry No. 20-3 at 47). The specification further states that “[w]hen the engagement member **5109** is positioned within the receptacle housing **5117**, the lower edge **5115** of the engagement member **5109** extends into the housing.” (*Id.* at 48). When these elements are connected together, the shade **5100** is “held into a fixed position when mounted to an electronic device.” (*Id.*).

Proximity’s means-plus-function arguments fails. The word “means” is not used, and “engagement member” is referred to as a structure, not as a means for performing a function, throughout the patent. However, UV Partners’s proposed definition of “engagement member” as “a structural element that interfaces with another object” appears to be overly broad. UV Partners does not explain what it means for an “element” to “interface” with another object. Nor does UV Partners explain how an “engagement member” differs from a “support member,” although the claim language describes what appear to be two structural elements serving different purposes.

Taking into account the claim language and specification, “**engagement member**” is construed to mean “**a structural element of a size and shape that fits within the receptacle**”

**housing and is held in place.”** The court presented this construction at the *Markman* hearing, and neither party had additional objections, other than those already briefed and addressed.

**No. 7. receptacle housing**

The patent describes an “engagement member” that fits within the “receptacle housing.” The parties dispute the meaning of “receptacle housing.” UV Partners argues that the ordinary meaning is “a structural element that receives or contains another object.” (Docket Entry No. 37-1). Proximity argues that “receptacle housing” should be viewed as a means-plus-function term, like “support member” and “engagement member.” Proximity argues that the specification language discusses receptacle housing in terms of its purpose, and that a skilled artisan would have to look to the specification language to understand how the support member and receptacle housing work together. As a result, Proximity seeks to limit “receptacle housing” to what is disclosed in the specification: “an enclosure that laterally receives and holds in place the piece attached to the lamp housing, and it has an internal size and shape substantially matching the size and shape of the piece attached to the lamp housing.” (Docket Entry No. 37-1). Proximity supports its argument in part by pointing to a *Wikipedia* article about engineering describing “housing” as an “exterior case or enclosure used to protect an interior mechanism.” See [https://en.wikipedia.org/wiki/Housing\\_\(engineering\)](https://en.wikipedia.org/wiki/Housing_(engineering)).

UV Partners argues in response that the intrinsic record does not contain a special definition of “receptacle housing,” and the patentee did not disavow the full scope of this term during prosecution. *TomTom, Inc. v. Adolph*, 790 F.3d 1315, 1328 (Fed. Cir. 2015) (“[C]laim terms are generally given their plain and ordinary meaning to one of skill in the art when read in the context of the specification and prosecution history; the only exceptions to this general rule are when the patentee acts as his own lexicographer or when he disavows claim scope.”).

Proximity fails to overcome the presumption against means-plus-function. A “housing” is described as a structural object in the very *Wikipedia* article that Proximity relies on. The patent specification describes the following: “[a]n ultra-violet (UV) light source is at least partially enclosed in the lamp housing such that the adjustable attachment device includes an engagement member and a receptacle housing such that the engagement member can be removably fastened within the receptacle housing for holding the lamp housing in a fixed position.” (Docket Entry No. 20-3, abstract). In reference to Figure 49, the specification states that “[i]n use, a surface of the receptacle housing **4909** can be fastened using an adhesive, tape, hook and loop fastener, or other means for fastening the receptacle housing **4909** to a surface of a personal computer (PC).” (Docket Entry No. 20-3 at 47).

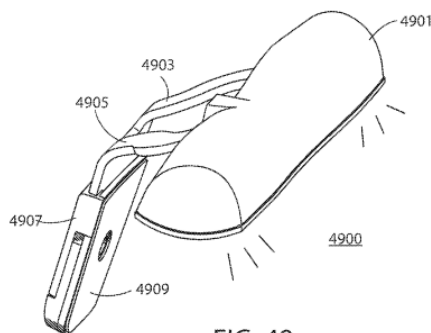


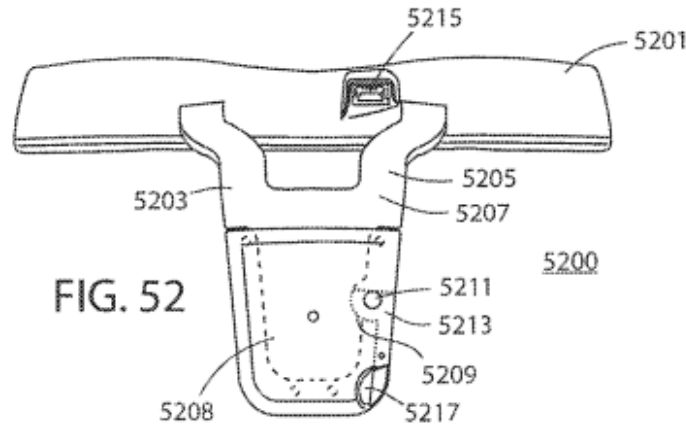
FIG. 49

In reference to Figure 51, the specification describes a “locking mechanism” that includes a “receptacle housing **5117** that is sized and shaped to accept the engagement member **5109** into an opening **5119** at the top portion of the receptacle housing **5117**.” (Docket Entry No. 20-3 at 47). Figure 52 is described as follows:

FIG. **52** is a rear view of a portable light fastening assembly **5200** with the lock fastened in accordance with an embodiment of the invention. The portable light assembly **5200** is illustrated with the support members **5203**, **5205** extending from the rear of the shade which join with the engagement member **5207**. The engagement member **5207** rotates about point **5209** and is shown inserted into

the receptacle housing 5208 where the latch 5213 is illustrated in a closed position.

(Docket Entry No. 20-3 at 48).



“Receptacle housing” provides a sufficiently definite structure to avoid means-plus-function analysis. The claim language and specification make clear that the receptacle housing and engagement member are meant to be fastened together and then unfastened or separated. This aspect is not reflected in the definition proposed by UV Partners, which is “a structural element that receives or contains another object.” The parties agreed at the *Markman* hearing that this term should be construed to be consistent with the definition of “engagement member.” (Docket Entry No. 52 at 81–82).

The court construes “**receptacle housing**” to mean “**a structural element of a size and shape that receives or can receive an engagement member and hold it in place.**”

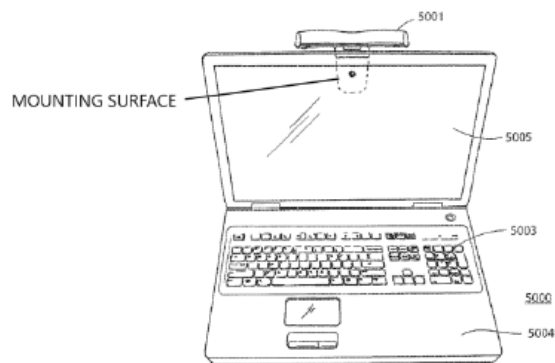
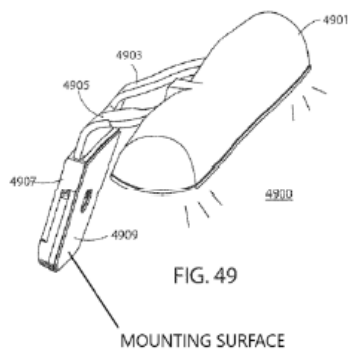
**Nos. 14, 15, 16. a mounting surface for mounting; mounting surface; mounting surface is configured to be attached using an adhesive**

Dependent Claims 3 and 11 recite the “receptacle housing” as including a “mounting surface for mounting the portable light fastening assembly to the [*sic*] at least one of the table stand and the monitor.” (Docket Entry No. 20-3 at 49). Dependent Claims 4 and 12 recite “[t]he portable

light fastening assembly of [Claims and 11] wherein the mounting surface is configured to be attached using an adhesive.” (*Id.*).

UV Partners argues that “mounting surface” should be defined as a “surface capable of interfacing with another object.” Proximity argues that the term “mounting surface” is indefinite, making Claims 3, 4, 11, and 12 invalid. The term “mounting surface” is not defined in the patent, and there is no figure showing a mounting surface. Proximity argues that the broad definition UV Partners provides no way to distinguish dependent Claims 3 and 11 from independent Claims 1 and 9. (Docket Entry No. 55-1).

UV Partners argues that the independent claims differ from the dependent claims because Claim 1 does not include a mounting surface, but Claims 3 and 11 do recite mounting surfaces, as shown in the figures below:



(Docket Entry No. 20-3 at 34).

It does not appear that all the claims require a mounting surface, which differentiates the dependent claims from the independent claims. UV Partners provides examples of figures in the patent showing that the assembly is attached to another object, such as a computer screen, using a clip device. The clip could clip onto the human interface object, and not be mounted such as through the use of adhesive.

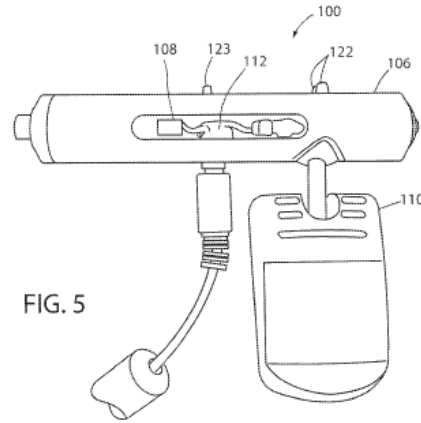


FIG. 5

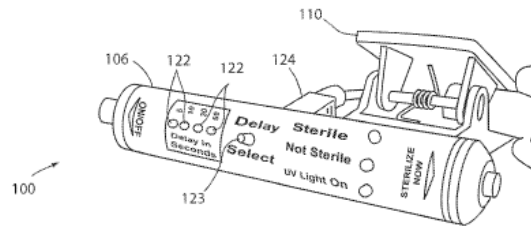


FIG. 6

(*Id.* at 5).

However, UV Partners’s definition of a mounting surface as one that “interfaces with another object” is too broad. The court construes “**mounting surface**” to mean “**a surface on which another object or objects can be placed or to which another object or objects can be readily joined or attached.**”

Nos. 18, 19, 20, 21, 22, 23, 24, 25, 26.      first coupler; second coupler; first and second couplers cooperate to removably couple; third coupler; first and second couplers cooperate to removably couple; first and third couplers cooperate to removably couple<sup>6</sup>; removably coupleable; removably couple; configured to be selectively and removably coupleable to the second coupler and the third coupler

<sup>6</sup> The parties repeat this term in their claim construction chart. (Docket Entry No. 37-1).

Proximity and UV Partners have a number of disputes over terms with the word “coupler” or variations, such as “coupleable.” The language in Claims 9, 11, and 16 is as follows:

9. A portable light fastening assembly comprising:

a lamp housing configured to removably affix to at least one of an electronic device and a table stand;

an ultra-violet (UV) light source at least partially enclosed in the lamp housing, and

an attachment device extending from the lamp housing, wherein the attachment device includes a support member and a **first coupler** and wherein the attachment device is configured to removably affix the portable light fastening assembly to at least one of a table stand and a monitor;

a **second coupler** joined to at least one of an electronic device and a table stand;

wherein the **first and second couplers cooperate to removably couple** the lamp housing to at least one of the electronic device and the table stand.

...

11. The portable light fastening assembly of claim 9, wherein the **second coupler** includes a mounting surface for mounting to the [sic] at least one of the electronic device and the table stand.

...

16. The portable light fastening assembly of claim 9, including a **third coupler** joined to at least one of an electronic device and a table stand, wherein the **first and third couplers cooperate to removably couple** the lamp housing to at least one of the electronic device and the table stand joined to the third coupler, whereby the portable light fastening assembly is **configured to be selectively and removably coupleable to the second coupler and the third coupler.**

(Docket Entry No. 20-3 at 49) (emphasis added).

UV Partners argues that the term “coupler” describes a class of “structural elements that connect objects.” UV Partners argues that “engagement member” and “receptacle housing” are examples of “couplers,” but that not all couplers are either engagement members or receptacle housings. UV Partners argues that “coupler” in Claim 1 means neither “engagement member” nor “receptacle housing.” See, e.g., *Innova/Pure Water*, 381 F.3d at 1119–20 (“[W]hen an applicant

uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms.”).

Proximity first argues that “coupler” is indefinite because it describes anything that attaches, and that it is not clear from the claim language or the specification—which does not define coupler—how the “coupler” differs from an attachment device or other structures that connect one object to another.

The specification does not disclose an example of a coupler. The parties do not cite expert testimony on what “coupler” would mean to someone of ordinary skill in the art. Nor do the parties cite relevant prosecution history. At the *Markman* hearing, the court asked the parties about the difficulties in defining the term as a “structural element that connects.” In response, UV Partners suggested the following:

- “first coupler” can be construed to mean “a structural element that connects the lamp housing to a second coupler”;
- “second coupler” can be construed to mean “a structural element that connects to the first coupler”;
- “first and second couplers cooperate to removably couple” can be construed to mean “readily connect to and disconnect from one another”; and
- “third coupler” can be construed to mean “an additional structural element that connects to the first coupler that is not the second coupler.”

(Docket Entry No. 51 at 32–42). These constructions separate the various couplers from each other and from structures such as the engagement member, the support member, and the receptacle housing. These constructions are also consistent with the claim language. At the hearing, Proximity maintained its indefinite objection to these definitions, but did not otherwise dispute them. The court adopts the above constructions.

**No. 29. hold the lamp housing in a fixed position**



Dependent Claims 2 and 10 recite “the portable light fastening assembly of [claims 1 and 9], wherein the attachment device holds the lamp housing in a fixed position.” (Docket Entry No. 20-3 at 49). Proximity’s claim construction chart challenged this term as indefinite, but without explanation. No construction seems necessary. As UV Partners explains:

This term simply means the attachment device retains the lamp housing in a stationary position. Any further construction of this phrase would contribute nothing to an understanding of the invention. Similar language is used repeatedly throughout the abstract and the specification.

(Docket Entry No. 33 at 40 (citing Docket Entry No. 20-3 at 2:9–10, 19:9–11, 19:39, 20:57–58, 21:2–3)). Proximity’s counsel agreed at the *Markman* hearing that no construction was necessary.

The relevant excerpt is below:

THE COURT: Holds the lamp housing in a fixed position. Claim 10.

MR. AZZI: We talked about that during the break, Your Honor. And, David, correct me if I am wrong. But I think our construction, retains the lamp housing in a stationary position, was acceptable to both of us.

MR. ANDERSON: It is. I think we sort of covered that earlier with some --

MR. AZZI: I think that’s right.

THE COURT: Okay. So what does that leave us in need of doing? Have we made it through the list?

MR. AZZI: We have.

MR. ANDERSON: We have.

(Docket Entry No. 51 at 43–44). The claim need not be construed and will be given its ordinary meaning.

#### **IV. Conclusion**

- a. “Attachment device” is construed to mean “a device configured to be readily fastened or joined to, and readily removed or separated from, one or more objects.” Because all claims in the ‘652 Patent include or depend on the term “attachment device,” the court need not construe the following four other related terms that include variations of the word “attach”: “the attachment device extending from the housing”; “attachment device is attached to the human interface device”; “removably attach”; “configured to removably attach to a separate human interface device.”
- b. “Illumination pattern [that] substantially corresponds to the touch surface” is construed to mean “the light output that covers substantially the same area as the touch surface.”
- c. “Configured to measure movement of the attachment device relative to the human interface device” is construed to mean “structured, arranged, or designed to detect movement of the attachment device in its position relative to the position of the human interface device.”
- d. “Predetermined movement is measured” is construed to mean “threshold movement of the attachment device is detected.”
- e. The term “substantially all of the infrared light transmitted” will not be construed and is accorded its plain and ordinary meaning.
- f. “Portable light fastening assembly” is construed to mean “a light assembly that can be readily fastened or joined to, and then readily removed or separated from, one or more objects.” Because all claims include the term “portable light fastening assembly,” the limitation need not be imported into any other term definition in the ‘624 patent, and the following terms need not be construed: “attachment device extending from the lamp housing”; “attachment device”; “configured to removably affix”; “configured to removably affix the portable light fastening assembly”; “removably affixing”; “configured to be removably fastened”; “configured to be removably fastened within the receptacle housing for removably affixing the portable light fastening system”; “attachment device enables use of the portable light fastening assembly at another location.”
- g. “Support member” is not means-plus-function term and is construed to mean “a structural element that supports another object.” A “pair of support members” are construed to mean “a pair of structural elements that support another object.”
- h. The terms “support member is integrally connected to the rear of the shade” and “portion of the attachment device is integrated” do not add further limitations to independent Claims 1 and 9. Dependent Claims 6, 7, 14, and 15 are invalid under 35 U.S.C. § 112(4).
- i. “Engagement member” is construed to mean “a structural element of a size and shape that fits within the receptacle housing and is held in place.” It is not a means-plus-

function term. The court need not construe “a paired engagement member” beyond its construction of “engagement member.”

- j. “Receptacle housing” is construed to mean “a structural element of a size and shape that receives or can receive an engagement member and hold it in place.” It is not a means-plus-function term.
- k. “Mounting surface” is construed to mean “a surface on which another object or objects can be placed or to which another object or objects can be readily joined or attached.” The additional term variations of “mounting surface” such as “a mounting surface for mounting” and “mounting surface is configured to be attached using an adhesive,” need not be further construed.
- l. “First coupler” is construed to mean “a structural element that connects the lamp housing to a second coupler.”
- m. “Second coupler” is construed to mean “a structural element that connects to the first coupler.”
- n. “First and second couplers cooperate to removably couple” is construed to mean “readily connect to and disconnect from one another.”
- o. “Third coupler” is construed to mean “an additional structural element that connects to the first coupler that is not the second coupler.”
- p. “Holding the lamp housing in a fixed position,” is not indefinite, need not be construed, and will be given its plain and ordinary meaning.

SIGNED on July 14, 2022, at Houston, Texas.



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Lee H. Rosenthal  
Chief United States District Judge