

**UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

ZEN DESIGN GROUP LIMITED,

Plaintiff,

v.

Case No. 16-12936

SCHOLASTIC, INC.,

Defendants.

/

OPINION AND ORDER CONSTRUING CLAIMS

This matter is before the court for construction of the relevant claims in U.S. Patent No. 6,860,616 ("the '616 Patent") pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). Plaintiff Zen Design Group Limited and Defendant Scholastic Inc. have submitted extensive briefing and the court held a claim construction hearing.

I. BACKGROUND¹

Plaintiff is the owner of the '616 Patent entitled "Ultraviolet Light Writing System." The patent purports to describe a pen capable of writing with a type of ink invisible under normal conditions, but with a tendency to fluoresce when exposed to ultraviolet light. To this end, the pen also includes a bulb that emits light of the requisite wavelengths to reveal the writing otherwise not visible.

¹ The facts set forth in the Background Section provide only background and context. They do not supplement or supplant the court's construction as set forth in the court's discussion of the claims.

The purported inventiveness of the pen is that it eliminates a former inconvenience of writing with invisible ink—the separation of the invisible ink pen from the visualization equipment. (Dkt. # 1-2, Pg. ID 13.) The inconvenience created by this separation arose when a writer wished to review his written work intermittently, but was not able to do so easily. In order to utilize the visualization light and reveal the written ink, the writer needs to pause and put down the writing instrument. Additionally when the writing instrument and the visualization equipment were unattached, the writer may lose one piece or the other rendering the remaining piece essentially useless. The '616 Patent eliminates this inconvenience because it has “a visualization element integrated with an invisible ink writing instrument.” (*Id.*)

Plaintiff filed this action alleging that Defendant sold a suite of over fifty infringing products (the “Accused Products”). (Dkt. # 1.) Defendant filed counterclaims requesting a declaration of non-infringement and invalidity of the '616 Patent. (Dkt. # 9.) Pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), the court held a claim construction hearing.

II. CLAIMS TO BE CONSTRUED

The parties have submitted the following phrases for construction by the court (phrases for construction are underlined, and those construed by themselves and as a part of a larger phrase are double-underlined):

A. Claim 1

What is claimed is:

1. A pen-light comprising: a battery holder having a distal terminus and proximal terminus;

a battery within said holder;

a switch;

a light emitting diode module within said holder, said module selectively forming an electrical circuit with said battery and said switch, said light emitting diode emitting a wavelength of less than 420 nanometers;

a pen assembly having a cap end and a pen tip end, said pen assembly mateably attachable to said battery holder via both the cap end and pen tip end; and

an ink or dye refill in fluid communication with a pen tip extending from the pen tip end and fluorescing in the visible portion of the light spectrum upon exposure to light having a wavelength of less than 420 nanometers. (Dkt. # 1-2 Pg. ID 15.)

B. Claim 7

7. The pen-light of claim 1 wherein said pen assembly is transparent or translucent.

C. Claim 15

15. An improved writing system including a writing surface, a pen containing an ink or dye with visible light fluorescence upon exposure to a light wavelength shorter than that of the ink or dye visible fluorescence and a handheld light source that emits a wavelength stimulating visible fluorescence in the ink or dye applied to the writing surface, wherein the improvement lies in the pen and light source being integrated into a penlight comprising;

a battery holder having a distal terminus and proximal terminus;

a battery within said holder;

a switch;

a light emitting diode module within said holder, said module selectively forming an electrical circuit with said battery and said switch, said light emitting diode emitting a wavelength of less than 420 nanometers;

a pen assembly having a cap end and a pen tip end, said pen assembly

mateably attachable to said battery holder via both the cap end and pen tip end; and

an ink or dye refill in fluid communication with a pen tip extending from the pen tip end and fluorescing in the visible portion of the light spectrum upon exposure to light having a wavelength of less than 420 nanometers.

D. Claim 16

16. A pen-light comprising:

a housing;

an pen tip extending from said housing;

an ink or dye refill in fluid communication with said pen tip, said refill containing an ink or dye that fluoresces in the visible portion of the light spectrum upon exposure to light having a wavelength of less than 420 nanometers;

a light emitting diode within said housing emitting at least one wavelength less than 420 nanometers;

a battery within said housing; and

a switch assembly completing an electrical circuit between said light emitting diode and said battery upon engagement thereof;

wherein said pen tip and said light emitting diode extend from opposing ends of said housing.

III. STANDARD

In *Markman*, the Federal Circuit proscribed a specific process for trial courts to follow in their initial review of a patent infringement claim. 52 F.3d at 976. Pursuant to *Markman*, a court conducting a patent infringement analysis undertakes a two-step process. First, the court must determine the meaning and scope of the protected patent. This step, claim construction, requires the court to determine the meaning of disputed

terms within the patent's claims and define the scope of the patent's claims themselves.

A “claim” is the portion of the patent in which the inventor/patentee is “particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C.A. § 112(b). A claim “defines precisely what his invention is,” *White v. Dunbar*, 119 U.S. 47, 52 (1886), or rather it defines the invention for which the patentee is asserting he should be given the right to exclude others from producing. See *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004); see also *Altoona Publix Theatres v. Am. Tri-Ergon Corp.*, 294 U.S. 477, 487 (1935) (“Under the statute it is the claims of the patent which define the invention.”).

“The construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.” *Embrex, Inc., v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000) (quotation omitted). In construing a claim the court evaluates evidence intrinsic to the patent record including “the patent claims and specifications, along with the patent's prosecution history.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court should keep in mind that “the language of the claim defines the scope of the protected invention.” *Bell Commc'n Research, Inc. v. Vitalink Commc'n Corp.*, 55 F.3d 615, 619 (Fed. Cir. 1995). For this reason, “resort must be had in the first instance to the words of the claim” *Id.* at 620 (quoting *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 759 (Fed. Cir. 1984)). “[C]laims must be given meaning consistent with how they would have been understood at the time of invention by a

person having ordinary skill in the art.” *SimpleAir, Inc. v. Sony Ericsson Mobile Commc’ns AB*, 820 F.3d 419, 430 (Fed. Cir. 2016). “Claims must also be read in view of the specification, of which they are a part.” *Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1376 (Fed. Cir. 2017) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005)). A patent’s specification is the “written description of the invention, and of the manner and process of making and using it” and “set[s] forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.” 35 U.S.C.A. § 112(a).

In addition to intrinsic evidence, the court may also consider extrinsic evidence “to aid [it] in coming to a correct conclusion as to the true meaning of the language employed in the patent.” *Markman*, 52 F.3d at 980 (quotations omitted). Extrinsic evidence includes “expert testimony, dictionaries, [and] treatises.” *Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016). However, “[e]xtrinsic evidence may not be used ‘to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” *Wi-Lan, Inc. v. Apple, Inc.*, 811 F.3d 455, 462 (Fed. Cir. 2016) (quoting *Phillips*, 415 F. 3d at 1324).

Claim construction is a question of law for the court. *Markman*, 52 F.3d at 976, 979. “[W]hen the district court reviews only evidence intrinsic to the patent . . . the Court of Appeals will review that construction de novo.” *Teva Pharm. USA, Inc.*, 135 S. Ct. at 841. However, the court’s “subsidiary factual findings” regarding extrinsic evidence are reviewed for clear error. *Id.* The “ultimate construction of the claim” remains a legal conclusion reviewed de novo. *Id.*

Once the court has interpreted the claims at issue, the second step requires comparing the properly construed claim and the accused device to determine whether the accused device is infringing. *Id.* at 976. The infringement analysis, generally, is for a jury.

IV. DISCUSSION

A. “*a light emitting diode within said housing*” (Claim 16)

The disagreement between Plaintiff’s and Defendant’s respective interpretations of “a light emitting diode within said housing” is with respect only to the meaning of the word “within” and whether it means the light emitting diode (“LED”) is “at least partially inside” or “fully enclosed inside” the housing.² Plaintiff advocates the former understanding, Defendant the latter. The phrase “a light emitting diode within said housing” is used in Claim 16, which begins by stating that it encompasses “a pen-light comprising: . . .” (Dkt. # 1-2, Pg. ID 15, col 6.) Claim 16 then goes on to list the comprising components including a housing, a “pen tip extending from said housing,” a LED “within said housing,” and a “battery within said housing.” *Id.* The Claim concludes its list of the comprising components by stating “wherein said pen tip and *said light emitting diode extend from opposing ends of said housing*.” *Id.* (emphasis added). This clarification follows the list of components and brings additional meaning to the terms to which it refers therein. Therefore, the LED is “within the housing” and “extend[s] from”

² Although Plaintiff and Defendant initially disagreed as to whether “light emitting diode” referred to a lens or a bulb, they have since agreed that the term refers to a bulb and that the accused products have such bulbs.

an end of said housing. As Plaintiff argues, Defendant's proposed interpretation of "within" cannot be correct because the LED cannot be both fully enclosed inside the housing and extend from one end of the housing. Rather based on the unambiguous language of Claim 16, "within" is more properly understood to mean "at least partially inside" because this meaning is consistent with the LED extending from one end of the housing. *Clare v. Chrysler Grp. LLC*, 819 F.3d 1323, 1327 (Fed. Cir. 2016) ("The language of the claims determines what the patentee regards as the invention and defines what the patentee is entitled to exclude.") As a result, the phrase "a light emitting diode within said housing" refers to a light emitting diode at least partially inside said housing.

Even if the claim language were ambiguous, the remainder of the patent confirms that the court's interpretation is correct. For instance, the patent's specification describing the second alternative embodiment provides further certainty that the patentee intended "within" to mean at least partially inside. The description states, "The pen-light has a housing that terminates in a pen tip . . . The opposite end of the housing terminates in an LED." Termination indicates the end or discontinuance of the housing. Therefore, in this embodiment, the pen tip and the LED must be beyond the end of the housing and cannot be fully enclosed within it.

The remainder of the description confirms this understanding. The patentee explains that the LED's "leads" are located at the "base" of the LED and engage with the battery that is "enclosed within the housing." The patentee modified the word "within"

and clarified that *the battery* is *enclosed* within the housing. The patentee did not so clarify when referring to the LED.³ Instead, the patent states, “[T]he pen-light has a clip *proximal* to the LED to facilitate attachment to an article of clothing or paper.” (emphasis added.) Considering that the clip is not inside of the housing,⁴ for the clip to be proximal to, i.e., near the *beginning* of the LED, at least the beginning of the LED must be exposed beyond the housing. Therefore, the base of the LED is engaged with the battery inside of the housing while the beginning of the LED is near the clip outside of the housing. In sum, there is ample intrinsic evidence to show that “a light emitting diode within said housing” refers to a light emitting diode at least partially inside of said housing.

B. “*a light emitting diode module within said holder*”
(Claims 1, 7, 15)

The parties present the same dispute regarding the word “within” as used in the

³ Defendant argues that the patentee’s use of the modifier “enclosed” in reference to the battery housing actually supports its interpretation of the word “within” because elsewhere in the patent, the patentee has referred to the same battery as both “within” the holder/housing and “enclosed within.” Likewise the patent refers to the same LED feature as both “within” the housing and as “contained within.” Such interchangeable usage of the modified and unmodified forms of the word “within” suggests to Defendant that the unmodified term has the same meaning as the modified term. Defendant argument is sound, but it does not support its conclusion. Defendant’s argument fails because it assumes that “enclosed” and “contained” have the same meaning. In contrast, an object may be contained inside of something without being fully enclosed inside of it. It appears that the patentee invoked the modifier “enclosed” in the above description to differentiate the battery enclosed within the housing from the LED contained within the housing.

⁴ For a clip to attach to an external object such as an article of clothing, the clip would need to be located on the exterior of the pen.

phrase “a light emitting diode within said holder” in Claims 1, 7, and 15. The question now becomes whether the word “within” as used in, “a light emitting diode module within said holder,” in Claim 16 should be understood any differently than the word “within” as used in “a light emitting diode within said housing” in Claims 1, 7, and 15.⁵ While the parties listed these two phrases separately in their Joint Claim Interpretation Chart and in their Statements of Issues presented, the parties have not provided any indication that the phrases should be interpreted differently. Rather, they grouped the phrases together in their briefing and presented a single argument section centered on their respective interpretations of the word “within.”

Generally, a patentee would not ascribe a word with one meaning under one claim and a different meaning under a different claim in the same patent without explicitly so providing. *Phillips*, 415 F.3d at 1314. (“Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.”). The court finds no basis to deviate from this well-established rule of claim construction and interpret the phrases differently. There exist only two differences between the phrases. First, Claim 16 utilizes the word “housing” whereas Claims 1, 7, and 15 utilize the word “holder.” Second, Claims 1, 7, and 15 refer to a “module” whereas that word is absent from Claim 16. Upon careful inspection of the patent’s specification, the court concludes that these

⁵ The phraseology of Claims 1, 7, and 15 is used in the description of the preferred embodiment whereas the phraseology of Claim 16 is used in the description of the alternative embodiments.

differences do not affect the meaning of the word “within” contained in the phrases.

The components described above form something analogous to a *matryoshka*, the Russian folk-art nesting doll: the “module” is inside the “holder” and the “holder” is inside the “housing.” The housing includes a pen containing ink and the pen-light. (Dkt. # 1-2, Pg. ID 13, col. 2.) (“The present invention involves a pen . . . contained in combination with an . . . (LED) within a housing.”) The pen-light contains the holder. *Id.* (“The pen-light has a battery holder”) The holder includes the battery and the module. *Id.* (“The pen-light has *a battery holder containing a battery*. . . . The battery rests in electrical contact with *an LED module within the battery holder*.” (emphasis added).) The module “includes a battery contact, an LED, and optionally a voltage modifying circuit.” *Id.*

Claim 16 does not use the word “holder” or “module.” The alternative embodiments do not contain a separate holder or module inside of the housing. Instead, all components are included in the housing; essentially the nesting doll analogy becomes an eggshell in the alternative embodiments because it has no inner layers. Figures 2-4 and their descriptions are consistent with this manner of understanding.

Neither party has argued that the difference between the preferred embodiment—the nesting doll form—and the alternative embodiments—the eggshell form—is meaningful to their dispute. Indeed the court has found no reason to conclude that “a light emitting diode module within said holder” and “a light emitting diode within said housing” should be interpreted differently. Rather, the patent’s Summary of the Invention confirms that the word “within” should be understood to mean “at least

partially inside” throughout the patent. It states that “the pen-light includes a housing with a pen tip extending therefrom. . . A light emitting diode . . . is *also* within the housing.” (Dkt. 1-2, Pg. ID # 13, col.1) (emphasis added.) The term “also” indicates that the immediately referred to object—the pen tip—is within the housing. However, the sentence describing the pen tip unambiguously states that it extends from the housing. The pen tip cannot extend from the housing and simultaneously be fully enclosed within it. Therefore, the word “within” is more properly understood to mean “at least partially inside.” As such, the court concludes that the word “within” should be read consistently throughout Claims 1, 7, 15, and 16.⁶

C. “*light emitting diode emitting a/at least one wavelength of less than 420 nanometers*” (Claims 1, 7, 15, 16)

The parties next dispute the meaning of a “[LED] emitting a wavelength of less than 420 nanometers” and a “[LED] emitting *at least one* wave length of less than 420 nanometers.” (emphasis added.) The parties’ first contention over the phrases is whether the LED is “capable of emitting” the designated wave length or is “presently emitting” the designated wave length. Plaintiff advocates for the former understanding, Defendant the latter.

1. Emitting

Defendant’s only argument for why the word emitting should be understood to

⁶ Notably, while Defendant’s proposed interpretation of “within” would prohibit the use of Plaintiff’s proposed interpretation, the converse is not true. Nothing in the language “at least partially inside” prohibits the LED from being “fully enclosed inside” the holder in an embodiment.

mean “presently” emitting is that the word “emitting” is a present participle and a present participle is the “present action of the verb.” However, this is not entirely accurate; a present participle is “a form of a verb that ends in ‘ing’ and comes after another verb to show continuous action.” Cambridge Academic Content Dictionary (2017). It is “a participle that typically expresses present action in relation to the time expressed by the finite verb in its clause.” Merriam Webster Dictionary (2017). Comparatively, a participle is “a word having the characteristics of both verb and adjective.”⁷ *Id.* It is “a form of a verb, often ending in “-ed” or “-ing” and used with auxiliary verbs to make verb tenses, or to form adjectives.” Cambridge Academic Content Dictionary (2017). (emphasis added.) As Defendant points out, light emitting diode or LED is a noun as used in “light emitting diode emitting a/at least one wavelength of less than 420 nanometers.” The second use of the word “emitting” is part of a phrase that describes the noun LED by explaining its functionality. Therefore, “emitting” is more properly understood to be a participle used to form an adjective. In other words, the phrase “light emitting diode emitting a/at least one wavelength of less than 420 nanometers” explains that the LED is the type of LED that emits the specified type of light when it is emitting light.

This interpretation of the phrase is consistent with the invention claimed and the remainder of the patent. As Plaintiff points out, it would make little sense for the patentee to claim rights to the pen-light only during the moments when it is actually

⁷ For example, in the phrases “the finishing touches” and “the finished product,” “finishing” and “finished” are participles formed from the verb “finish.” Merriam Webster Dictionary (2017).

emitting light. It would be equally nonsensical to presume that the pen-light is presently emitting at all times especially given the remainder of the patent. For example, the Summary of the Invention describes a circuit that forms between the LED and the housing “upon engagement of a switch assembly.” (Dkt. # 1-2, Page ID 13, col. 1.) The description of the preferred embodiment explains that “activation of the switch completes an electrical circuit thereby illuminating the LED” and “activation of the LED by engaging the switch allows light to shine. . . .” (*Id.* at col. 2.) If the LED were presently emitting, there would be no need for a switch or for activation. The word emitting is more reasonably understood to mean “capable of emitting.”

2. During the writing process

The parties’ second dispute regarding “light emitting diode emitting a/at least one wavelength of less than 420 nanometers” is whether the clarifying phrase “during the writing process” should be appended to the end of the phrase. Defendant argues that it should be so added, premised on an alleged disclaimer by Plaintiff in the patent’s prosecution history.

The prosecution history of a patent refers to the record of the proceedings before the Patent and Trademark Office (“PTO”). *Phillips*, 415 F.3d at 1317. When an inventor applies for a patent, the patent examiner in the PTO will reject the patent application or particular claims of the proposed patent if the proposed patent attempts to claim prior art. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 398 (Ct. Cl. 1967); see also 37 CFR 1.104(a)(1) and (c). There are a variety of caveats and rules, but explained simplistically, prior art is some type of technology or knowledge, typically contained in

another patent or publication, that demonstrates that the proposed patent's claimed invention is not actually new. See 35 U.S.C. § 102(a).

When an application is rejected, an inventor will often amend the proposed patent to limit and restrict the proposed patent's claims in an effort to remedy the overlap between the proposed patent and the prior art and induce the PTO examiner to grant the patent. *Autogiro Co. of Am.*, 384 F.2d at 398. If the patent is then approved, the inventor is estopped from later arguing that subject matter ceded under the amendments is within the scope of the claimed invention even if that subject matter is equivalent to the claimed subject matter. See *Alpex Computer Corp. v. Nintendo Co.*, 102 F.3d 1214, 1221 (Fed. Cir. 1996). In other words, the inventor cannot construe the claims narrowly before the Patent Office and later broadly before the courts in a claim construction hearing. *Autogiro Co. of Am.*, 384 F.2d at 398. This rule is known as file-wrapper estoppel or prosecution history estoppel.

Rather than formally amending the proposed patent, an inventor may address an alleged conflict between a proposed patent and prior art by representing to the examiner that a particular claim has a narrower scope and does not encompass the prior art. "When an applicant tells the PTO that a prior art reference lies outside the scope of his claim, he is bound by that argument." *Regents of Univ. of Minnesota v. AGA Med. Corp.*, 717 F.3d 929, 942 (Fed. Cir. 2013). This rule is known as prosecution disclaimer. "[D]isclaimer 'ensures that claims are interpreted by reference to those that have been cancelled or rejected.'" *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1063 (Fed. Cir. 2016) (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535

U.S. 722, 733 (2002) (internal quotation and citation omitted). “[I]n order for prosecution disclaimer to attach, the disavowal must be both clear and unmistakable.”

Massachusetts Inst. of Tech. v. Shire Pharm., Inc., 839 F.3d 1111, 1119 (Fed. Cir. 2016) (quoting *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1325 (Fed. Cir. 2013)). The court will not find a prosecution disclaimer “[w]here the alleged disavowal is ambiguous, or even ‘amenable to multiple reasonable interpretations,’” *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016) (citing *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1359 (Fed.Cir.2003)). “The party seeking to invoke prosecution history disclaimer bears the burden of proving the existence of a ‘clear and unmistakable’ disclaimer that would have been evident to one skilled in the art.” *Trivascular, Inc.*, 812 F.3d at 1063–64.

Defendant’s allegation of prosecution disclaimer here centers on the PTO’s examination of the ‘616 Patent with respect to prior art, namely Patent No. 6,439,734 (the “Lo” Patent). The ‘616 Patent was initially rejected by the PTO because it purported to claim subject matter already claimed by the Lo Patent. The Lo Patent claims a pen that discloses a pen light with an LED, but said LED does not emit ultraviolet wavelengths capable of illuminating invisible security ink. In response the PTO’s rejection, Plaintiff both amended the ‘616 Patent and provided statements to the PTO limiting the scope of the patent’s claims. The amendments were as follows (the underlined portion indicates the language added to the claims):

a light emitting diode module within said holder, said module selectively forming an electrical circuit with said battery and said switch, said light emitting diode emitting a wavelength of less than 420 nanometers;

* * *

an ink or dye refill in fluid communication with a pen tip extending from the pen tip end and fluorescing in the visible portion of the light spectrum upon exposure to light having a wavelength of less than 420 nanometers.

The statements Plaintiff provided to the PTO, in relevant part, were:

In contrast to pending claim 1, Lo neither discloses nor motivates one of skill in the art regarding a light emitting diode emitting wavelengths less than 420 nanometers in conjunction with gray security ink. Furthermore, while Lo discloses an aggregation of a functional pen and a functional flashlight, the claimed invention operates to illuminate security ink and thereby render it visible, *but absent illumination from the light emitting diode the writings with an inventive pen would not be visible during the writing process.* (emphasis added).

Following these clarifications, the PTO examiner approved the '616 Patent and removed the prior art reference to the Lo Patent. Defendant now argues that Plaintiff's representations to the PTO indicated that the claimed invention pertained only to a LED emitting *during the writing process*. Because Defendant's argument is premised on statements made during the course of prosecution rather than amendments to the claims, Defendant must identify "a clear disavowal" by Plaintiff of the patent's otherwise broader scope. See *Abbott Labs. v. Baxter Pharm. Prod., Inc.*, 334 F.3d 1274, 1278 (Fed. Cir. 2003).

In an effort to identify a disavowal by Plaintiff, Defendant mischaracterizes the only statement Plaintiff made to the PTO using the phrase "during the writing process." In the course of explaining the principle difference between the Lo Patent and the '616 Patent—that one concerns invisible ink and the other does not—Plaintiff wrote:

while Lo discloses an aggregation of a functional pen and a functional flashlight, the claimed invention operates to illuminate security ink and

thereby render it visible, but absent illumination from the light emitting diode the writings with an inventive pen would not be visible *during the writing process*. (emphasis added).

Interpreting Plaintiff's statement reasonably, Plaintiff was explaining that the Lo Patent's pen expels gray ink that is visible during the writing process without illumination by a particular wavelength of light whereas the ink from the '616 Patent's pen is not visible during the writing process unless exposed to the proper light wavelength. *Avid Tech., Inc.*, 812 F.3d at 1045 (stating that a disclaimer will not be found when the patentee's statements have multiple reasonable interpretations). Such a statement does not indicate that the '616 Patent's LED *must* emit *during* the writing process.

Plaintiff's amendments to the claims corroborate this understanding. Neither of the amendments limited the '616 Patent's pen-light to a LED that emits "during the writing process." Alternatively, the amendments focused on the type of light the pens' LEDs emit. This focus makes sense given that the purpose of the amendments was to distinguish Plaintiff's invisible ink pen-light from the Lo Patent's regular ink pen-light. Nothing in the record suggests that the timing of the light emissions was relevant to the prosecution. In fact, the Lo Patent does not purport to claim a LED that emits during the writing process or even in relation to the writing process. Instead, the Lo Patent emphasizes the "aesthetic appearance" created by the lighting assembly. See Dkt. # 32-5, Page ID 753-54, col. 2 lines 11 & 61, col. 3 lines 18 & 26. Given this context, Plaintiff's isolated use of the phrase "during the writing process" is not a "clear and unmistakable" disavowal of the claim term's otherwise broader scope. *Massachusetts Inst. of Tech.*, 839 F.3d at 1119; see also *Openwave Sys., Inc. v. Apple Inc.*, 808 F.3d

509, 513 (Fed. Cir. 2015) (“To find disavowal, we must find that the specification is both so clear as to show reasonable clarity and deliberateness, and so unmistakable as to be unambiguous evidence of disclaimer.”) (internal quotations omitted). Consequently, the court declines to append language to the patent’s unambiguous text. A “light emitting diode emitting a/at least one wavelength of less than 420 nanometers” is not limited to “during the writing process.”

D. “*mateably attachable*” (Claims 1, 7, 15)

The phrase “mateably attachable” is used to describe only two relationships in the patent’s claims: the relationship between the pen assembly and the battery holder (Claims 1, 7, & 15), and the relationship between the pen assembly and a joinder portion adjacent to the proximal terminus of the battery holder (Claims 4 & 6). These relationships exist only in certain embodiments of the pen-light because these components (the battery holder and the joinder portion) are present only in certain embodiments of the pen-light.⁸ Therefore, the portions of the patent pertaining to the pen assembly’s relationship with the battery holder or the joinder portion provide the best indication of the proper meaning of “mateably attachable.”

While the specification does not contain the phrase “mateably attachable,” it does elaborate on the relationship between the pen assembly and the battery holder by

⁸ As explained above, *supra* Section IV.D, not every embodiment of the claimed invention includes a battery holder. Recall that the eggshell embodiments have a single housing containing all of the components. Further, not every embodiment that has a battery holder includes a joinder portion. See Dkt. # 1-2, Pg. ID 13, col. 2. (stating that the battery holder *preferably* has a joinder portion).

explaining that the battery holder is configured to selectively mate with the pen assembly. See Dkt. # 1-2, Pg. ID 13, col. 2 (explaining that “[t]he battery holder has a proximal terminus *configured to selectively mate* to a pen assembly”) (emphasis added). Plaintiff contends that “mateably attachable” means “capable of being joined together to be connected;” however, the phrase “selectively mate” indicates a unique relationship between the components that is more specific than joinder or connection. Two objects can be connected by a safety pin or joined by glue whereas “to mate” indicates a purposeful design wherein the pieces are intended to join together in a specific manner. Likewise the verb “configure” indicates the components are put together for operation in a particular arrangement or manner. Plaintiff’s proposed construction would encompass any configuration where the pen assembly and the battery holder could be connected. This construction is much broader than what the patent’s language contemplates.⁹

In the alternative, Defendant argues that “mateably attachable” means “adapted to engage a fitting.” While Plaintiff’s proposed language is faulty as overly broad, Defendant’s proposed language suffers from being too narrow. Defendant directs the court to language in the specification pertaining to the relationship between the pen assembly and the joinder portion of the battery holder. The specification explains that

⁹ Plaintiff argues that the Claim’s “language is clear on its face” and that it should be given its “plain meaning” (Dkt. # 32, Pg. ID 707.) In contrast, the court must refer to the patent for meaning because “mateably” does not have a defined meaning and Plaintiff has not provided any evidence of a commonly known meaning to ascribe to the word. While Plaintiff argues that “mateably” has been used in hundreds of patents, Plaintiff provides no analysis as to what meaning it was given in those patents or why said meaning should be imported here.

when the pen-light has a joinder portion “the female bayonet fitting is integrated” into the joinder portion. (*Id.*) The female bayonet fitting is “adapted to receive a complementary male bayonet fitting” located on the pen assembly. The specification states that other types of fittings are operative including “Luer, snap, and threaded.”¹⁰ Claim 6 tracks this explanation stating that the fittings may be “selected from a group consisting of: bayonet, snap and threaded.”

The court agrees that this explanation sheds some light on the meaning of “mateably attachable” in providing examples of how two components may attach in this way. As Defendant recognizes, a joinder portion is added as a component of the pen-light under dependent Claim 2. Then Claim 4, depending on Claim 2, further adds a configuration in which the joinder portion mateably attaches to the pen assembly.¹¹ Finally Claim 6 depends on Claim 4 and specifies a configuration wherein the mateable attachment to the joinder portion is accomplished through “fittings.” Neither the joinder portion nor the fittings components are included in the language of the original independent Claim 1 which refers to the mateable attachment of the pen assembly only to the battery holder. When reading these claims in light of their dependency on one another, one skilled in the art would readily understand that the fittings are a method of mateably attaching *the joinder* to the pen assembly (Claim 6). Nothing in the Claims

¹⁰ Luer is a standardized brand of fittings that includes fittings that fit together through a number of methods including by threading, pressure, or rotation.

¹¹ It is worth noting that the addition of the “mateably attaches” language in Claim 4 indicates that embodiments in which the joinder portion is not mateably attached to the pen assembly could exist.

suggests that the fittings explained in the description are the sole method of mateably attaching the joinder to the pen assembly, let alone the sole method of mateably attaching *the battery holder* to the pen assembly (Claim 4). See *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1329 (Fed. Cir. 2006) (stating that the court “declines to read a limitation from the written description into the claims”).

Indeed, the description of the fittings in the specification provides insight into how two components might otherwise be mateably attachable. The specification explains that the fittings are able to mate because they are complementary and adapted to engage one another. See Dkt. # 1-2, Pg. ID 13, col. 2. Similarly the specification refers to the assembly and holder components being configured to selectively mate. *Id.* Given this description in the specification and the structure of the claims, the court concludes that “mateably attachable” means “configured to engage in a complementary manner.”

V. CLAIM CONSTRUCTION

In light of the above discussion and analysis, the disputed claim terms of U.S. Patent No. 6,860,616 are construed as follows:

Claim Phrase	Court's Construction
“a light emitting diode module within said holder” (Claims 1, 7, 15)	“a light emitting diode module at least partially inside of said holder”
“a light emitting diode within said housing” (Claims 16)	“a light emitting diode at least partially inside of said housing”
“light emitting diode emitting a/at least one wavelength of less than 420 nanometers” (Claims 1, 7, 15, 16)	“light emitting diode emitting a/at least one wavelength of less than 420 nanometers”
“mateably attachable” (Claims 1, 7, 15)	“configured to engage in a complementary manner”

VI. CONCLUSION

For the reasons set forth above, IT IS ORDERED that the claims of United States Patent Number 6,860,616 are CONSTRUED as set forth in the body of this order.

s/Robert H. Cleland

ROBERT H. CLELAND

UNITED STATES DISTRICT JUDGE

Dated: April 11, 2018

I hereby certify that a copy of the foregoing document was mailed to counsel of record on this date, April 11, 2018, by electronic and/or ordinary mail.

s/Lisa Wagner

Case Manager and Deputy Clerk

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