

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ABBOTT DIABETES CARE INC. and
ABBOTT DIABETES CARE LIMITED,

Plaintiffs,

v.

DEXCOM, INC.,

Defendant.

Civil Action No. 21-977 (KAJ)

MEMORANDUM OPINION

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JORDAN, Circuit Judge, sitting by designation.

I. INTRODUCTION

Plaintiffs Abbott Diabetes Care Inc. and Abbott Diabetes Care Ltd. (collectively, “Abbott”) filed suit against DexCom, Inc. (“DexCom”) for infringement of twelve United States Patents Nos. 10,820,842 (“the ‘842 patent”), 10,827,954 (“the ‘954 patent”), 10,874,338 (“the ‘338 patent”), 10,881,341 (“the ‘341 patent”), 10,945,647 (“the ‘647 patent”), 10,945,649 (“the ‘649 patent”), 10,952,653 (“the ‘653 patent”), 10,959,654 (“the ‘654 patent”), 10,966,644 (“the ‘644 patent”), 10,973,443 (“the ‘443 patent”), 11,000,216 (“the ‘216 patent”), and 11,013,440 (“the ‘440 patent”) (collectively, “the patents-in-suit”). (D.I. 108 at ¶ 6.) Jurisdiction is proper under 28 U.S.C. §§ 1331 and 1338. The patents-in-suit relate to improvements of continuous glucose monitoring systems (“CGMs”), which help patients suffering from diabetes to constantly track their glucose levels. (D.I. 135 at 1.) Before me is claim construction for seven claim terms related to ten of the twelve patents-in-suit.¹ (D.I. 135 at 6–39.)

For the reasons set forth below, the term “first spring” as used in the ‘443 patent does not require construction and is given its plain and ordinary meaning; the term “first spring in a loaded position” as used in the ‘341, ‘654, and ‘216 patents does not require construction and is given its plain and ordinary meaning; the term “slot” as used in the

¹ The parties initially asked the Court to construe nine claim terms but “are no longer asking the Court” to construe two terms. (D.I. 180.) The parties do not ask me to construe any claim terms within the ‘338 and ‘644 patents.

‘649 and ‘440 patents is construed to mean “a narrow opening, groove, or channel”; the term “rotor comprising a cylindrical shape” as used in the ‘649 and ‘440 patents is construed to mean “rotor having an overall cylindrical shape”; the term “failure mode condition” as used in the ‘842 and ‘653 patents is construed to mean “condition that adversely affects function”; the term “chemically bonded” as used in the ‘954 patent is construed to be limited to “ionic and covalent bonds”; and the term “insertion mechanism configured to position the sensor subassembly against the base of the transmitter mount by causing movement of the sensor subassembly” as used in the ‘647 patent is not a means-plus-function claim and will be afforded its plain and ordinary meaning.

II. BACKGROUND

A. Technology Overview

Diabetes is a chronic disease characterized by prolonged periods of low or high glucose (sugar) levels in the body, which can cause severe health problems such as heart attacks, strokes, organ failure, loss of vision and limbs, skin ulcers, and even death. (D.I. 108 at ¶ 15.) Regular blood sugar monitoring is the most important thing a patient can do to manage his diabetes. That has traditionally been done using the “fingerstick” method, whereby a patient pricks his finger to obtain blood, places the blood on a test strip, and inserts the test strip into a monitor that would display the patient’s blood glucose value. (D.I. 108 at ¶¶ 16–17.) But the “fingerstick” method is inconvenient and painful, and it only provides a blood glucose value at one specific point in time, requiring patients to frequently prick their fingers to update their understanding of their blood glucose level.

(D.I. 108 at ¶ 17.) As an alternative, various companies sought to develop CGMs to constantly monitor glucose levels to eliminate the need for patients to regularly prick their fingers. (D.I. 108 at ¶ 18.)

CGMs systems typically include three components: (1) an inserter (or applicator) that “implants the glucose sensor partially beneath the skin and into contact with interstitial fluid”; (2) a glucose sensor and transmitter that is attached to the patient’s body and senses and transmits electrical signals; and (3) a display device, such as a reader or smart device, with proprietary software that displays the patient’s blood glucose level. (D.I. 135 at 1–2.) But early CGMs products “had significant drawbacks including high cost, short wear times, burdensome and painful insertion techniques, non-intuitive operation requiring significant training, and calibration methods requiring regular fingersticks – the painful and invasive sampling that [CGMs] technologies were designed to avoid.” (D.I. 108 at ¶ 18.) Abbott’s patents-in-suit sought to remedy those issues by improving upon CGM technology.

I will describe the subject matter of each of the patents-in-suit in more detail below.

B. Procedural History

Abbott filed this suit against DexCom on July 1, 2021. (D.I. 1.) Abbott makes the FreeStyle Libre CGM product line, and it accuses DexCom, who makes the G6 CGM product line, of infringing the patents-in-suit. (D.I. 108 at ¶¶ 19–36.)

On October 4, 2021, Abbott filed a First Amended Complaint against DexCom, (D.I. 17), and DexCom sought to dismiss it on November 1, 2021, for failure to state a claim under Federal Rules of Civil Procedure 12(b)(6), (D.I. 21), which I denied on February 8, 2022 (D.I. 49.) Abbott filed a Second Amended Complaint, the operative complaint, on May 20, 2022. (D.I. 108.) Fact discovery closed on March 3, 2023, and expert discovery is set to be completed on May 5, 2023. (D.I. 288; 291.)

As mentioned before, the parties have submitted disputed claim terms of the patents-in-suit for claim construction. (D.I. 135; 143.) Following the completion of briefing, I held a *Markman* hearing on October 7, 2022. (D.I. 195.)

III. DISCUSSION

A. Legal Standard

The construction of a patent, including the terms within its claims, “is exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). When a court construes a claim, its words “are generally given their ordinary and customary meaning.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention” when read “in the context of the entire patent, including the specification.” *Id.* at 1313.

When construing a patent's claims, the court begins by "reviewing the same resources as would" a person having ordinary skill in the art ("PHOSITA") at the time of the invention. *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). "Those sources include the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004); *see also Vitronics*, 90 F.3d at 1582–83.

In interpreting a claim, the court should first look to the intrinsic evidence – the claims, patent specification, and file history, the specification being "the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582). "[T]he claims themselves[,]" which appear at the end of the specification, "provide substantial guidance as to the meaning of particular claim terms." *Id.* at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive[,]" and "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term." *Id.* The "descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based on the description." *Id.* at 1315 (quoting *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985)). But courts construing claims must be cautious not to read "limitations from the

specification ... into the claims[.]” *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002).

A court should also consider the patent’s file, or prosecution, history, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996), which “provides evidence of how the [United States Patent and Trademark Office] and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317. Although “less significant than the intrinsic record[.]” courts may also consult extrinsic evidence “including expert and inventory testimony, dictionaries, and learned treatises.” *Id.* at 1317 (internal quotation marks and citations omitted). But extrinsic evidence is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319.

The court is not confined to consider those sources “in any specific sequence”; rather, “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. For example, the court may begin its analysis by familiarizing itself with a term by reviewing a dictionary or technical literature before analyzing how the specification uses the term. *Id.* In the end, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be ... the correct construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). For that reason, a construction that excludes an inventor’s product or the patent’s preferred embodiment is rarely correct. *Modine Mfg. Co. v. Int’l Trade Comm’n*,

75 F.3d 1545, 1550 (Fed. Cir. 1996) (“[A] claim interpretation that would exclude the inventor’s device is rarely the correct interpretation[.]”).

When construing a means-plus-function claim, “[t]he first step in [its] construction ... is to identify the particular claimed function.” *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003); *see also* 35 U.S.C. § 112(f) (“An element in a claim for a combination ... shall be construed to cover the corresponding structure ... described in the specification and equivalents thereof.”). A court then must “look to the specification and identify the corresponding structure for that function[.]” which must be “link[ed] or associate[d] ... to the function recited in the claim.” *Elekta AB*, 344 F.3d at 1210. To recite a means-plus-function claim, a patentee must “recite some structure corresponding to the means in the specification, as the statute states, so that one can readily ascertain what the claim means and comply with the particularity requirement[.]” *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999).

B. The ‘443 Patent

The ‘443 patent was issued on April 13, 2021, and is titled “Sensor Inserter Assembly.” (D.I. 108 at ¶ 55.) It is aimed at improving the inserter assembly, which was “intimidating, painful, and prone to human error.” (D.I. 135 at 3.) Some early CGMs required patients to pinch their skin and then jab in a needle at a 45-degree angle to insert the sensor. (D.I. 135 at 2.) Other CGMs required patients to manually insert a needle and sensor combination into their skin, which was then held in place by a retaining

mechanism until the patient withdrew the needle. (D.I. 135 at 2–3.) The ‘443 patent is generally directed to “devices and methods for inserting a subcutaneously implantable electrochemical sensor in a patient” for “the in vivo monitoring of an analyte, such as glucose or lactate, using a sensor to provide information to a patient about the level of the analyte.” (D.I. 108, Exhibit J at 2:18–20.) It claims an inserter with a mount coupled to its end so that – when the mount is pressed against the patient’s skin – a push of a button causes a sharp (which I understand to mean, for example, a needle) to pierce the patient’s skin, insert the glucose sensor, and retract the sharp. (D.I. 108, Exhibit J at 20:7–35.) The inserter device comprises an actuator button, a slidable shuttle, a first spring, a second spring whose top portion is in contact with the slidable shuttle, and a sharp. (D.I. 108, Exhibit J at 19:12–15; 20:8–10.)

Abbott has asserted infringement of claims 1, 13–14, 18, 20–21, and 23 of the ‘443 patent. (D.I. 108 at ¶ 61.) Asserted claims 1 and 13 are independent claims. (D.I. 108, Exhibit J at 19:11–34; 20:7–35.) The parties only dispute the term “first spring” as used in the ‘443 patent. That term appears in claims 1, 2, 3, 13, 14, and 15 of the ‘443 patent. (D.I. 108, Exhibit J at 19:13–14, 25, 36–37; 20:9, 19, 38–39.)

Abbott proposes that no construction is necessary and that “first spring” be given its plain and ordinary meaning. (D.I. 135 at 6.) DexCom counters that Abbott’s proposal “conflicts with both the intrinsic and extrinsic evidence, [and] improperly seek[s] to expand the scope of an alleged invention from two decades ago to read on to DexCom’s products.” (D.I. 143 at 11.) DexCom proposes the construction “compression spring

loaded along its axis” and argues that its construction is consistent with the specification, the file history, and extrinsic evidence. (D.I. 143 at 11.) Abbott has the better of the argument, and “first spring” will be given its plain and ordinary meaning.

A “spring” is a common term readily understood by both laymen and those skilled in the art relevant to the patent. (D.I. 136 at ¶ 45.) Springs are elastic devices that provide force via stored energy, and the most common type of springs are coil springs, which include compression, extension (or tension), and torsion springs. (D.I. 136 at ¶¶ 46–47.) DexCom’s construction would limit “first spring” to only compression springs, a subset of coil springs.

The claims of the ‘443 patent are dispositive of the meaning. Independent claims 1 and 13 claim a method of using the inserter device and the assembly itself, respectively. (D.I. 108, Exhibit J at 19:11–34; 20:7–35.) Neither contain any language limiting the “first spring” with respect to spring type or loading. (D.I. 108, Exhibit J at 19:11–34; 20:7–35.) Claims 2 and 14 recite no language restricting “first spring” in a similar fashion. (D.I. 108, Exhibit J at 19:35–37; 20:36–38.) Only dependent claims 3 and 15 restrict the “first spring” to a “coil spring,” which, as previously discussed, include compression, extension, and torsion springs. (D.I. 108, Exhibit J at 19:38–39; 20:39–40.) Those dependent claims indicate that “first spring” includes extension and torsion springs, and neither of those springs are a “compression spring loaded along its axis.”

The specification provides additional support that “first spring” is intended to encompass a wide variety of drivers for advancing the sharp into the patient’s skin. The

specification teaches generally that the required force can be obtained “using, for example, a cocked or *wound* spring, a burst of compressed gas, an electromagnet repelled by a second magnet, or the like, within the insertion gun.” (D.I. 108, Exhibit J at 7:64–66.) (emphasis added.) But wound springs include torsion springs, a type of spring that “is considered to be both a coil spring and a wound spring[,]” and is not a type of compression spring. (D.I. 136 at ¶ 54.) The specification also discusses the “thrusting force used to introduce the sensor into the subcutaneous tissue” as being stored in the device as “potential energy within the coils of the spring[.]” (D.I. 108, Exhibit J at 13:3–8.) Nowhere does the specification contemplate that only a compression spring can be used within the claimed invention to store that potential energy. Rather, the language discusses springs generally.

DexCom presents three arguments to support its construction, none of which are compelling. First, DexCom argues that every embodiment in the ‘443 patent shows a compression spring in the place of the “first spring.” (D.I. 143 at 12–13; D.I. 144 at ¶ 52.) It points to Figures 12 and 16 – which both use compression springs in place of the “first spring” – as exemplary. (D.I. 143 at 12–13.) It claims that the specification “*teaches away* from utilizing other kinds of springs that exert rotational forces, such as torsion springs[,]” because Figure 16 discusses the “first spring” as having specific dimensions which correspond to how a PHOSITA would refer to a compression spring. (D.I. 143 at 13.) But the Federal Circuit has expressly cautioned courts not to read

“limitations from the specification ... into the claims,” and this Court will decline to do so. *Teleflex*, 299 F.3d at 1326.

DexCom attempts to avoid that straightforward and well-settled principle of claim construction by relying on *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003), for the proposition that “where the specification makes clear ... that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.” (D.I. 143 at 13.) That is far from the case at hand. The specification discusses the driver force in general terms, including language like “for example” and “or the like,” and it also includes a wound spring as a specific example. (D.I. 108, Exhibit J at 7:64–66.) Additionally, the technical dimensions that DexCom contends teach away from other springs, like torsion springs, do not mention a specific type of spring and merely describe the spring in one specific embodiment. (D.I. 143 at 13.)

Second, DexCom argues that the specification does not support Abbott’s proposed construction. (D.I. 143 at 13–17.) It contends that the phrase “a cocked or wound spring” in the specification indicates that the word “wound” “is being used grammatically to describe whether the spring is in tension (i.e., as a synonym to ‘cocked’), and not in reference to other spring types, like torsion springs.” (D.I. 143 at 14.) It also claims that if “wound” references other spring types besides compression springs, “any claim scope captured by the term ‘wound’ was *explicitly disclaimed* during prosecution.” (D.I. 143 at 14.) In support of that proposition, DexCom points out that pending claim 18 recited a

“first spring” that “is a coil spring or a wound spring[.]” but an examiner issued a rejection in light of prior art and the phrase “or a wound spring” was subsequently removed. (D.I. 143 at 14–15.) (emphasis removed.)

As in this case, “[w]hen the prosecution history is used solely to support a conclusion of patentee disclaimer, the standard for justifying the conclusion is a high one” and requires a “clear and unmistakable” disclaimer. *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016). There is no “clear and unmistakable” disclaimer to support DexCom’s argument. Although the phrase “or a wound spring” was removed from the claim, Abbott did not clearly and unmistakably disclaim that scope during prosecution. Rather, Abbott submitted a declaration, with accompanying evidence, to “swear behind” the prior art that “the inventors had reduced to practice an inserter within the claims before [the prior art]’s priority date [that] ... used a coil spring, which also is one form of a ‘wound’ spring[.]” (D.I. 152 at 4.) Given that declaration, the statement could not have been removed to overcome the prior art reference because Abbott was swearing behind the reference’s priority date. Additionally, during the subsequent prosecution of two patents related to the ‘443 patent, which are not part of this suit, the same examiner allowed dependent claims specifying that the “first spring” is a “wound spring.” (D.I. 152 at 5.) “Where multiple patents derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.” *Samsung Elecs. Co., Ltd. v. Elm 3DS Innovations, LLC*, 925 F.3d 1373, 1378 (Fed. Cir. 2019) (citing *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d

1307, 1316 (Fed. Cir. 2015)). The phrase must have been removed for a reason besides disclaimer, and “[t]here is no clear and unmistakable disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term.” *01 Communique Lab., Inc. v. LogMeln, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012) (internal quotation marks and citation omitted); *see also Enzo Life Scis., Inc. v. Gen-Probe, Inc.*, 2015 WL 4101205, *7 (D. Del. July 7, 2015) (holding that there is no “clear and unmistakable disavowal” in the absence of an “express statement in the prosecution history indicating why the patentee made the amendments”).

Similarly, DexCom’s argument that the word “wound” describes a loaded spring is unavailing. That argument conflicts with its prosecution disclaimer argument and proposed construction. If the term “wound spring” in the specification means a loaded spring, then, according to DexCom’s disclaimer argument, Abbott has disclaimed all loaded springs. But DexCom construes “first spring” to mean a “compression spring *loaded along its axis.*” (D.I. 143 at 11.) (emphasis added.) DexCom cannot convincingly argue that Abbott disclaimed loaded springs while simultaneously arguing that the term “first spring” is a loaded spring. But even if the Court accepts that “wound” as used in the specification describes a loaded spring, that language still describes springs generally, not just a compression spring, and therefore would still support Abbott’s position.

Third, DexCom argues that its construction is consistent with the claims because “[c]laims 1 and 13 encompass a ‘first spring’ that is ‘a compression spring loaded along

its axis,’ including sub-types such as coil springs, accordion springs, and wave springs.” (D.I. 143 at 15.) It goes on to say that dependent claims 3 and 15 are narrower and only cover the coil sub-type of springs. (D.I. 143 at 15.) That argument, however, misses that coil springs include compression springs as well as extension (or tension) and torsion springs. (D.I. 136 at ¶¶ 46–47.) “First spring” cannot be limited to compression springs if dependent claims 3 and 15 contemplate using extension and torsion springs which are types of coil springs. DexCom fails to respond to that point.

For the reasons discussed, no limiting construction is necessary and “first spring” is given its plain and ordinary meaning as used in the ‘443 patent.

C. The ‘341, ‘654, and ‘216 Patents

The ‘341, ‘654, and ‘216 patents are titled “Medical Device Inserters and Processes of Inserting and Using Medical Devices” and they belong to the same patent family and share a common specification.² (D.I. 108 at ¶¶ 43, 51, 57; Exhibits D, H, K.) The ‘341 patent was issued on January 5, 2021, the ‘654 patent was issued on March 30, 2021, and the ‘216 patent was issued on May 11, 2021. (D.I. 108 at ¶¶ 43, 51, 57.) The patents are aimed at improving the inserter assembly; their innovations “provide a compact, easy-to-use, and relatively pain-free inserter” by “tak[ing] advantage of multiple axes for the insertion process that minimize the overall size of the

² There are some differences in the cited references and related disclosures of the patents, but the technical substance is the same. (D.I. 108, Exhibits D, H, K.)

inserter.” (D.I. 135 at 3.) Patients press a button along an axis, which releases a spring from a loaded position and causes a sliding member to move within a straight track along a second axis to insert the needle and sensor into the patient along a third axis. (D.I. 135 at 3.) The ‘341, ‘654, and ‘216 patents are generally directed to “[a]n apparatus for insertion of a medical device in the skin of a subject ... as well as methods of inserting medical devices.” (D.I. 108, Exhibits D, H, K at Abstract.) Those patents claim various glucose monitoring systems and insertion assemblies for inserting a glucose sensor into a patient. (D.I. 108, Exhibit D at 34:28–38:25; Exhibit H at 34:28–38:8; Exhibit K at 34:21–38:19.)

Abbott has asserted infringement of claims 1, 4, 13, 16, 18, 26–27, and 29 of the ‘341 patent; claims 1, 8, 10, 15, 20, 22, and 26 of the ‘654 patent; and claims 1–4, 6, 11, 13, 16–17, 19, 23–26, and 28–29 of the ‘216 patent. (D.I. 108 at ¶ 61.) Asserted claims 1 and 26 of the ‘341 patent, claims 1 and 20 of the ‘654 patent, and claims 1 and 26 of the ‘216 patent are independent claims. (D.I. 108, Exhibit D at 34:28–35:12; 36:40–37:27; Exhibit H at 34:28–35:3; 35:62–36:45; Exhibit K at 34:21–35:2; 36:32–37:18.) The parties only dispute the term “first spring in a loaded position” as used in those patents. That term appears in the independent claims of the ‘341, ‘654, and ‘216 patents. (D.I. 108, Exhibit D at 34:28–35:12; 36:40–37:27; Exhibit H at 34:28–35:3; 35:62–36:45; Exhibit K at 34:21–35:2; 36:32–37:18.) Dependent claims 2, 4, 27 and 29 of the ‘341 patent, 7 and 23 of the ‘654 patent, and 2 and 29 of the ‘216 patent include limitations

that recite a “first spring.” (D.I. 108, Exhibit D at 35:13–16; 35:22–23; 38:1–6; 38:17–21; Exhibit H at 35:14–17; 36:54–57; Exhibit K at 35:3–6; 38:13–19.)

Abbott proposes that no construction is necessary and “first spring in a loaded position” be given its plain and ordinary meaning. (D.I. 135 at 6.) DexCom proposes the construction “compression spring loaded along its axis” and argues that its construction “properly excludes claim scope that Abbott surrendered during prosecution. (D.I. 143 at 11.) DexCom’s disclaimer argument is unpersuasive.

As stated above, a “spring” is a common term readily understood by both persons having ordinary skill in the art and laymen. (D.I. 136 at ¶ 45.) Springs encompass many varieties including compression, extension (or tension), and torsion springs. (D.I. 136 at ¶¶ 46–47.) DexCom’s construction would once again limit the “first spring” to only compression springs, a subset of coil springs.

Having already construed “first spring” broadly in the ‘443 patent to include a variety of different springs beyond compression springs, I decline to narrow the definition here, and DexCom has provided no persuasive reason to do so. The claims alone are dispositive because dependent claims 4 and 27 of the ‘341 patent expressly state, “wherein the first spring is a torsion spring.” (D.I. 108, Exhibit D at 35:22–23; 38:1–6.); *see Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022) (“By definition, an independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must cover that embodiment as well.”) Further, the

independent claims of the '341, '654, and '216 patents recite "a first spring in a loaded position" with no restriction on spring type. (D.I. 108, Exhibit D at 34:28–35:12; 36:40–37:27; Exhibit H at 34:28–35:3; 35:62–36:45; Exhibit K at 34:21–35:2; 36:32–37:18.) And since all of those patents derive from the same parent, the term should be construed the same for all three. *SightSound*, 809 F.3d at 1316 ("Where multiple patents derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.") (cleaned up). The specifications also support a broad construction as their common summaries describe drivers that "may include a spring," without any limitations on the spring type. (D.I. 108, Exhibit D at 23:44; Exhibit H at 23:44; Exhibit K at 23:38.)

DexCom points out that, during prosecution, the Examiner rejected four dependent claims in the '654 and '216 patents that recited the "first spring in a loaded position" is a "torsion spring." (D.I. 120, Exhibit 45 at 3.) According to DexCom, Abbott's cancellation and amendment of the rejected claims serve as acquiescence to that purported determination and prove that Abbott clearly and unmistakably disclaimed its favored scope. (D.I. 143 at 4–6.) As to claims 4 and 27 in the '341 patent, DexCom argues that while those dependent claims include torsion springs, the Examiner never mentioned whether torsion springs could be included within the independent claim term "first spring in a loaded position." (D.I. 143 at 10.) DexCom argues that the Examiner merely allowed a set of claims that included dependent "torsion spring" claims in the '341 patent. (D.I. 143 at 10.) Further, at oral argument, Dexcom asserted that this

discrepancy is explained as “simply a situation where the examiner missed this claim in the [‘341] patent.” (D.I. 195 at 59.)

I believe that DexCom has misinterpreted the law. A genus claim may cover a species claim, even if the species claim lacks written description. *See Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1568 (Fed. Cir. 1997) (“[E]very species in a genus need not be described in order that a genus meet the written description requirement.”); *Pfizer Inc. v. Teva Pharms. USA, Inc.*, 555 F. App’x 961, 968 (Fed. Cir. 2014) (“But written description does not require inventors, at the time of their application for a patent, to reduce to practice and be in physical possession of every species ... of a genus ... claim.”). DexCom’s disclaimer argument that the exclusion of a species claim of “torsion spring” for lack of written description necessarily bars it from coverage under a genus claim of “first spring in a loaded position” fails under that standard. DexCom’s argument that Abbott’s cancellation of species claims containing “torsion springs” in the ‘654 and ‘216 patents constitutes a disavowal of that term as covered under the genus claim “first spring in a loaded position” does not constitute a clear and unmistakable waiver of that claim scope. *See 01 Communique Lab.*, 687 F.3d at 1297 (“There is no clear and unmistakable disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term.”) (cleaned up).

Here, Abbott made the tactical decision to stop pursuing the species claim of “torsion spring” to move forward with prosecution of the ‘654 and ‘216 patents. That

does not foreclose coverage of the species from the genus of “first spring in a loaded position.” *Utter v. Hiraga*, 845 F.2d 993, 998 (Fed. Cir. 1988) (“A specification may, within the meaning of 35 U.S.C. § 112 ¶ 1, contain a written description of a broadly claimed invention without describing all species that claim encompasses.”). DexCom has not pointed to any clear and unmistakable disavowal of “torsion spring” being covered under the genus of the independent claim reciting “first spring in a loaded position.” Instead, Abbott canceled the species dependent claims without prejudice, “for the sole purpose of advancing prosecution, and without conceding the merits of the rejection[,]” while still disagreeing with the assessment of the Examiner. (D.I. 120, Exhibit 46 at 8–10.)

Moreover, I am unpersuaded by the argument that the Examiner simply “missed” claims 4 and 27 of the ‘314 patent. It is presumed that the Examiner understands the claims before her and did not overlook dependent claims which she allowed. *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1345–46 (Fed. Cir. 2020) (rejecting the argument that the “examiner simply overlooked ... dependent claim limitations when he allowed the claims.”). The Examiner did not expressly state that “first spring in a loaded position” could not comprise a “torsion spring.” She instead questioned whether the dependent species claims in the predecessor patents had written support in the specification. (D.I. 120, Exhibit 45 at 3.)

In short, the Examiner did not preclude the construction Abbott has proposed, and DexCom has not established a clear and unmistakable disclaimer, as required. For the

reasons discussed, I conclude that no construction is necessary and “first spring in a loaded position” should be given its plain and ordinary meaning as used in the ‘314, ‘654, and ‘216 patents.

D. The ‘649 and ‘440 Patents

The ‘649 and ‘440 patents are titled “Medical Device Inserters and Processes of Inserting and Using Medical Devices” and they belong to the same patent family and share a common specification. (D.I. 108 at ¶¶ 47, 59; Exhibits F, L.) The ‘649 patent was issued on March 16, 2021, and the ‘440 patent was issued on May 25, 2021. (D.I. 108 at ¶¶ 47, 59.) The patents are aimed at further improving the inserter technology by using a rotor with a torsion spring “configured to cause rotation of the rotor, which causes first and second slidable bodies and the glucose sensor to advance within the inserter housing in a linear direction, thereby inserting the sensor” in a quick and less painful manner than previous CGMs. (D.I. 135 at 3.) The ‘649 and ‘440 patents are generally directed to “[a]n apparatus for insertion of a medical device in the skin of a subject ... as well as methods of inserting medical devices.” (D.I. 108, Exhibits F, L at Abstract.) The ‘649 patent claims two inserter assemblies for inserting a glucose sensor into a patient, and the ‘440 patent claims a glucose monitoring system comprising a glucose sensor within an inserter housing. (D.I. 108, Exhibit F at 43:36–61; 44:45–45:19; Exhibit L at 43:37–44:7.)

Abbott has asserted infringement of claims 1, 6, 8, 10, 17–18, 25, and 28 of the ‘649 patent and infringement of claims 1, 7, 10–11, 17, and 24–25 of the ‘440 patent.

(D.I. 108 at ¶ 61.) Asserted claims 1 and 18 of the ‘649 patent and claim 1 of the ‘440 patent are independent claims. (D.I. 108, Exhibit F at 43:36–61; 44:45–45:19; Exhibit L at 43:37–44:7.) The parties dispute the terms “slot” and “rotor comprising a cylindrical shape” as used in those patents.

I. “slot”

The term “slot” appears in claims 1, 6, 8, 9, 18, and 20–22 of the ‘649 patent and in claims 1, 4, and 5 of the ‘440 patent. (D.I. 108, Exhibit F at 43:36–61; 44:9–10; 44:13–19; 44:45–45:19; 45:26–46:7; Exhibit L at 43:37–44:7; 44:16–20.)

Abbott proposes that “slot” be construed as “a narrow opening, groove, or channel.” (D.I. 135 at 15.) DexCom counters that Abbott seeks to “expand the scope of the patent beyond ‘what the inventors actually invented[,]’” and that the construction “[n]arrow opening through the first slidable body, through which the rotor follower projection extends” is proper. (D.I. 143 at 17–18.) In essence, the parties’ fundamental dispute is whether the term “slot” “encompasses *both* through-slots and non-through slots[,]” as Abbott proposes that “slot” as used in the patents covers both types of slots, but DexCom claims that it only covers through-slots. (D.I. 143 at 17.) Abbott wins this round too.

The word “slot” does not, on its own, denote or connote a through slot. Dictionaries describe it variously as a “hole,” that is, a through slot, or a “channel,” meaning a non-through slot. *See* “slot” in McGraw-Hill Dictionary of Scientific and Technical Terms (sixth ed. 2003); *see also* Webster’s Third New International Dictionary

(unabridged; 1986) (defining “slot” as “a hollow or depression” and “a long and narrow opening or groove”). And that general meaning is consistent with its usage in the ‘649 and ‘440 patents. There is no language in either patent (at least none that the parties have drawn my attention to) that limits the meaning of “slot” to through slots. On the contrary, even DexCom admits that “the specification sometimes uses ‘slot’ to mean a ‘non-through-slot,’” (D.I. 143 at 25–26), but it tries to avoid the implication that flows from that by saying those “isolated references ... are used in entirely different contexts, and are therefore immaterial to the *claimed* slot.” (D.I. 143 at 26.) That, of course, ignores the well-known canon of construction that “[o]rdinarily the same word in a patent has the same meaning throughout.” Robert J. Goldman, *Shwartz’s Patent Law and Practice* at 175 (Bloomberg BNA, 8th ed. 2015). See *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.”).

True enough, an embodiment provided in the specification and highlighted by DexCom (Embodiment 1300) involves a through slot, but it is axiomatic that limitations that may exist in a preferred embodiment are not to be imported into the claim.³ See *id.*

³ DexCom, of course, argues that it is not reading a limitation from Embodiment 1300 into the claim. It says that, instead, it is simply trying to show how a PHOSITA would understand the claims at issue. “To understand the function of that slot, the skilled artisan would look to the rest of the specification.” (D.I. 195 at 70.) It asserts that Embodiment 1300 is the only embodiment that a skilled artisan would rely upon to construe “slot” because “Embodiment 1300 is the only embodiment that uses a torsion spring as claimed to effectuate advancement.” (D.I. 143 at 19–20.) I am unpersuaded. There is no compelling basis to believe that a skilled artisan would only

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.”). And while DexCom asserts that construing the term “slot” according to its ordinary meaning would result in the invention being inoperable, (D.I. 143 at 21), that is simply not so (D.I. 152 at 16–20). Indeed, the parties would not be arguing about this term if DexCom were not concerned that its own G6 product, employing a non-through slot, is at some risk of being found to infringe.

I construe “slot” as used in the ‘649 and ‘440 patents to mean “a narrow opening, groove, or channel.”

2. *“rotor comprising a cylindrical shape”*

The term “rotor comprising a cylindrical shape” appears in independent claims 18 of the ‘649 patent and 1 of the ‘440 patent. (D.I. 108, Exhibit F at 44:45–45; Exhibit L at 43:37–44:7.) Independent claim 1 of the ‘649 patent, dependent claims 2, 5, 7–11, 19, and 21–23 of the ‘649 patent, and dependent claims 3 and 5–6 of the ‘440 patent include limitations that recite a “rotor.” (D.I. 108, Exhibit F at 43:36–65; 44:6–8; 44:11–24; 45:20–25; 46:1–9; Exhibit L at 44:12–15; 44:18–23.)

look at Embodiment 1300 to understand how the term “slot” is used in the patent claims. And, as previously mentioned, DexCom admits that “the specification sometimes uses ‘slot’ to mean a ‘non-through slot.’” (D.I. 143 at 25–26.) DexCom’s argument certainly looks like nothing more than an effort to read a limitation from a preferred embodiment into the claims.

Abbott proposes that the term “rotor comprising a cylindrical shape” be construed as a “rotor having an overall cylindrical shape.” (D.I. 135 at 19.) But DexCom argues that Abbott’s proposed construction misconstrues the word “comprising” – “which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim” – and that no construction is necessary, so the term should be given its plain and ordinary meaning. (D.I. 143 at 29.) (quoting *Genetech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997).)

DexCom is evidently trying to assert in an inter partes review of the ‘649 and ‘440 patents some prior art that it views as invalidating on this point. (D.I. 135 at 23.) To do so, it argues that “rotor comprising a cylindrical shape” should be given its plain and ordinary meaning, though it doesn’t specify what that meaning is. (D.I. 143 at 28–29.) Abbott argues – and DexCom does not dispute it⁴ – that the parties’ disagreement comes down to this: Abbott says the rotor itself must have an overall cylindrical shape while DexCom wants to lay the groundwork to argue that the limitation is satisfied if any subcomponent of the rotor has a cylindrical shape. (D.I. 135 at 19; D.I. 143 at 28–31.) Abbott’s reading makes more sense.

The notion that any subcomponent, no matter how small or incidental, could satisfy the cylindrical-shape limitation strains the natural understanding of the phrase.

⁴ In its Sur-Reply brief, DexCom calls this argument a “strawman[.]” but it fails to explain how Abbott’s characterization of its proposed construction is inaccurate. (D.I. 159 at 7.)

That is borne out by comments of the Examiner that seemed to equate “rotor comprising a cylindrical shape” with a “cylindrical rotor.” (D.I. 135 at 23.) (citing D.I. 120, Exhibit 30 at 3; D.I. 139, Exhibit 88 at Fig. 7A; Exhibit 89 at Fig. 2.) That the rotor in question is characterized by its cylindrical shape is, in my view, the best understanding of what is claimed and therefore I accept Abbott’s construction. I construe “rotor comprising a cylindrical shape” to mean a “rotor having an overall cylindrical shape” as used in the ‘649 and ‘440 patents.

E. The ‘842 and ‘653 Patents

The ‘842 and ‘653 patents are both titled “Methods and Systems for Early Signal Attenuation Detection and Processing” and they belong to the same patent family and share a common specification.⁵ (D.I. 108 at ¶¶ 37, 49; D.I. 108, Exhibits A, G.) The ‘842 patent was issued on November 3, 2020, and the ‘653 patent was issued on March 23, 2021. (D.I. 108 at ¶¶ 37, 49.) CGMs are designed to continually report glucose information – typically in the form of a numerical value, a trend arrow, or a graph of glucose concentration over time – but there are periods when the CGMs cannot report an accurate glucose reading. (D.I. 135 at 4.) Those periods are typically caused by a patient’s failure to recalibrate the system by taking a fingerstick measurement reading, by a system malfunction, by the sensor being dislodged from the patient’s body, or by signal

⁵ As with respect to footnote 2, there are some differences in the cited references and related disclosures of the two patents, but the technical substance of the ‘842 and ‘653 patents is the same. (D.I. 108, Exhibits A, G.)

errors, and, during that period, CGMs will not report data. (D.I. 135 at 4.) That is sometimes referred to as the “data-gap problem.” (D.I. 135 at 4.) The ‘842 and ‘653 patents solve the “data-gap problem” “by processing uncalibrated data using calibration parameters from a subsequent successful calibration event” so that the gap in data can be filled. (D.I. 135 at 4.) Those patents generally relate to identifying conditions that may result in unreliable data, “disabling the output of the sensor data” during that period, and then, once the adverse condition is no longer present, retrieving and outputting the processed sensor data from that period. (D.I. 108, Exhibits A, G at Abstract.) The ‘842 patent claims “a method of backfilling one or more sensor data gaps in an analyte monitoring system comprising one or more processors and analyte sensors” that involves detecting a failure mode condition, storing sensor data received from the analyte sensor, processing the sensor data, and outputting the processed stored sensor data in response to a correction of a failure mode condition. (D.I. 108, Exhibit A at 15:24–26.) The ‘653 patent claims a glucose monitoring system “wherein [a] failure mode condition causes one or more sensor data gaps to be outputted to the display of the receiver unit[,]” and the “sensor data gaps are at least partially filled by the [sic] at least a portion of the data indicative of the sensed glucose level after the correction of the failure mode condition.” (D.I. 108, Exhibit G at 15:63–16:3.)

Abbott has asserted infringement of claims 1–3, 6, 8, 10, 14–15, 17, and 19 of the ‘842 patent and claims 1, 3, 5–8, 11, 15, and 18 of the ‘653 patent. (D.I. 108 at ¶ 61.) Claims 1, 14, and 23 of the ‘842 patent and claim 1 of the ‘653 patent are independent

claims. (D.I. 108, Exhibit A at 15:24–41; 16:29–39; 17:28–18:3; Exhibit G at 15:26–62.) The parties only dispute the term “failure mode condition” as used in those patents. That term appears in claims 1–7, 10–15, 19–26, and 29–30 of the ‘842 patent, and in claims 1–12 and 15 of the ‘653 patent. (D.I. 108, Exhibit A at 15:24–67; 16:7–53; 16:66–18:17; 18:26–45; Exhibit G at 15:26–16:40; 16:56–61.)

Abbott proposes that “failure mode condition” be construed as a “condition that adversely affects function.” (D.I. 135 at 27.) DexCom contends that its construction is too broad and departs from the patents’ intrinsic evidence. (D.I. 143 at 37.) Instead, it proposes that “failure mode condition” be construed as a “condition that requires disabling of the output of sensor data.” (D.I. 143 at 37.) According to DexCom, Abbott’s proposed construction is an attempt to capture a “failure mode condition” that “occurs when the [DexCom CGMs] transmitter goes out of range of the receiver device that displays glucose data, and the data is subsequently backfilled when it comes back within range[,]” but the ‘842 and ‘653 patents’ specifications do not “contemplate[] a ‘failure’ based on loss of wireless connectivity.” (D.I. 143 at 37–38.) I construe “failure mode condition” as used in the ‘842 and ‘653 patents as a “condition that adversely affects function.”

The parties’ experts disagree on whether there is an accepted plain and ordinary meaning of “failure mode condition.” Abbott’s expert states that a PHOSITA would commonly associate the term “failure mode condition” with a condition “in which the reviewed item can fail to perform its intended design function.” (D.I. 137 at ¶¶ 88–89.)

(quoting D.I. 139, Exhibit 68 at 6–1.) Abbott’s expert asserts that “[t]his definition of ‘failure mode’ is consistent with a ‘condition that adversely affects function.’” (D.I. 137 at ¶ 90.) DexCom’s expert disagrees, stating, “the term ‘failure mode condition’ does not have an ordinary meaning to one of skill in the art in the field of these patents.” (D.I. 145 at ¶ 37.) Instead, DexCom’s expert proposes that a PHOSITA would understand “failure mode condition” to mean a “condition that requires disabling of the output of sensor data,” a narrower definition than Abbott’s intended construction. (D.I. 145 at ¶ 36.)

The claims of the ‘842 and ‘653 patents favor Abbott’s proposed construction. Dependent claims 2–4 and 15 of the ‘842 patent suggest that “failure mode condition” has a broader meaning than DexCom’s proposed construction of a “condition that requires disabling of the output sensor data.” (D.I. 108, Exhibit A at 15:42–54; 16:50–53.) Those claims state failure mode conditions comprising of: “signal errors associated with a transmitter unit of the analyte monitoring system or a receiver unit of the analyte monitoring system[,]” (D.I. 108, Exhibit A at 15:43–45; 16:51–53); “one or more of an inability to calibrate the sensor, a system malfunction, or a sensor dislodgement[,]” (D.I. 108, Exhibit A at 15:47–48); and “one or more of a sensor data value being outside a predetermined sensor data value range, a rate of change of one or more sensor data values being above a predetermined rate-of-change threshold, or a temperature measurement outside a predetermined temperature range[,]” (D.I. 108, Exhibit A at 15:50–54). Those broad failure mode conditions indicate that the term as used in the patent relates to conditions that adversely affect function as opposed to conditions that require disabling

of the output sensor data, as no language in those cited claims requires the disabling of output sensor data.

Dependent claims 4–9 of the ‘653 patent also suggest that “failure mode condition” has a broader meaning than DexCom suggests. (D.I. 108, Exhibit G at 16:4–20.) Those claims recite failure mode conditions comprising of: “a sensor communication error[,]” (D.I. 108, Exhibit G at 16:5–6); “a signal error associated with the data processing and transmitter unit[,]” (D.I. 108, Exhibit G at 16:8–9); “a signal error associated with the receiver unit[,]” (D.I. 108, Exhibit G at 16:11–12); “a system malfunction associated with the data processing and transmitter unit[,]” (D.I. 108, Exhibit G at 16:14–16); “a system malfunction associated with the receiver unit[,]” (D.I. 108, Exhibit G at 16:17–18); and “a sensor dislodgement[,]” (D.I. 108, Exhibit G at 16:20). All those claims suggest a definition of “failure mode condition” that reaches wider than a “condition that requires disabling of the output of sensor data” because they recite conditions adversely affecting function without any requirement of the disabling of output data. Claims 2–4 and 15 of the ‘842 patent and claims 4–9 of the ‘653 patent, which discuss failures associated with signal errors, suggest that a wireless communication error constitutes a “failure mode condition,” directly countering DexCom’s construction. (D.I. 108, Exhibits A at 15:42–54; 16:50–53; Exhibit G at 16:4–20.)

The specification of the ‘842 patent provides additional support that “failure mode condition” is intended to be construed as a “condition adversely affect[ing] function.”

The specification teaches that “one or more adverse conditions may include one or more of a sensor instability condition, a calibration failure condition, or a monitoring system failure condition.” (D.I. 108, Exhibit A at 13:60–62.) Similarly, “[t]he calibration failure condition may include one or more of an analyte level exceeding a predetermined threshold, a rate of change of an analyte level exceeding a predetermined threshold, a signal error associated with the reference data, a data unavailability condition, or a combination thereof.” (D.I. 108, Exhibit A at 14:1–5.) Further, the specification also teaches that a method contained in one embodiment may include

receiving sensor data from an analyte sensor of a sensor monitoring system, processing the received sensor data with time corresponding calibration data, outputting the processed sensor data, *detecting one or more adverse conditions associated with the sensor monitoring system, disabling the output of the sensor data during an adverse condition time period*, determining that one or more detected adverse conditions is no longer present in the sensor monitoring system, retrieving the sensor data during the adverse condition time period, processing the retrieved sensor data during the adverse condition time period, and outputting the processed received sensor data.

(D.I. 108, Exhibit A at 13:43–55.) (emphasis added.) Read together, those sections of the specification seem to use the term “adverse condition” as a synonym for “failure mode condition.” And further, “disabling the output of the sensor data” would seem to be an action more likely to follow rather than necessarily precede a “failure mode condition.”

The prosecution history of the ‘842 patent also supports Abbott’s construction. In a rejection of several claims for double patenting, the Examiner noted that while the claims’ recital of “failure mode condition,” was not identical

to an earlier patent claims' recital of an "adverse condition," the claims were "not patentably distinct from each other." (D.I. 120, Exhibit 54 at ¶ 3.) The Examiner thus stated that "a failure mode condition may be interpreted as a form of an adverse condition effecting [sic] an analyte monitoring system." (D.I. 120, Exhibit 54 at ¶ 3.)

DexCom presents several arguments to support its construction, none of which are compelling. It draws a different conclusion from the passage of the '842 patent specification referred to above, arguing that since it repeatedly describes an analyte monitoring system detecting a condition that may result in unreliable data before "disabling the output of the sensor data[,] " "failure mode condition" must mean a "condition that requires disabling the output of the sensor data." (D.I. 143 at 38–39.) But DexCom conveniently ignores that those two events are in the middle of a chain of events. (See D.I. 108, Exhibit A at 1:58–2:2.) DexCom offers no reason why "failure mode condition" is limited by "disabling the output of the sensor data during an adverse condition time period," but not by "determining that one or more detected adverse conditions is no longer present in the sensor monitoring system," or "retrieving the sensor data during the adverse condition time period," or "processing the retrieved sensor data during the adverse condition time period," or even "and outputting the processed received sensor data." (D.I. 108, Exhibit A at 1:58–2:2.)

DexCom also attempts to support its proposed construction by stating that the utility of Abbott's purported invention lies in disabling the output of data when it may

prove unreliable. (D.I. 143 at 38–39; *see also* D.I. 145 at ¶ 39.) It quotes the specification of the ‘842 patent to state that the patent’s goal is to “improve therapy or health management decisions.” (D.I. 143 at 39.) (quoting D.I. 108, Exhibit A at 13:41–42.) DexCom follows by stating that a PHOSITA “would recognize that it could be medically problematic to display inaccurate data to a user.” (D.I. 143 at 39.) Those explanations of utility seem accurate, but they do not lend themselves towards endorsing DexCom’s narrowing construction. Rather, they point towards one possible solution to a “failure mode condition,” which is to disable the output of sensor data.

DexCom’s remaining arguments center around the premise that Abbott’s proposed construction broadens “failure mode condition” beyond the ‘653 and ‘842 patents’ disclosures. (D.I. 143 at 39–41.) It first argues that Abbott mischaracterizes the patent examiner’s rejection as determinative. (D.I. 143 at 39–40.) DexCom argues that Abbott “pulls a sleight of hand” in reworking “adverse condition” into a “condition that adversely affects function.” (D.I. 143 at 40.) DexCom refers to its expert report, stating that even a flickering display would fall under Abbott’s definition. (D.I. 145 at ¶ 43.) That outcome would improperly broaden the claims, argues DexCom, because flickering does not produce a data gap, which it argues is what “failure mode condition” is supposed to address. (D.I. 143 at 40.)

That example is misplaced because, unless display flickering causes a data-gap of some kind to be somehow output to the display, it does not fall within the definition of “failure mode condition” within the scope of the claims. (D.I. 156 at ¶¶ 9–12.) The

patent examiner's exact words – repeated several times – that a “failure mode condition may be interpreted as a form of an adverse condition effecting [sic] an analyte monitoring system,” are also informative. (D.I. 120, Exhibit 54 at 3–4.)

DexCom next argues that Abbott's proposed construction lacks written description support. (D.I. 143 at 41.) DexCom refutes Abbott's inclusion of wireless interference as a failure mode condition, arguing that the language of the specification provides no such teaching. (D.I. 143 at 40.) The specification describes “signal errors associated with the ... transmitter unit, receiver unit, and the like[.]” (D.I. 108, Exhibit A at 13:23–24.) DexCom argues that the specification cannot describe a wireless connectivity issue, referring to further language in the specification that it claims explains that the invention relates to conditions requiring disabling the output of sensor data. (D.I. 143 at 40.) It argues that a lack of signal eliminates the need to disable the output of sensor data. (D.I. 143 at 40.) DexCom's expert likewise argues against wireless connectivity issues being swept into the “failure mode conditions” under the specification language referencing signal errors pertaining to the transmitter or receiver unit. (D.I. 145 at ¶ 46.)

Abbott's expert refutes those arguments that wireless interference would not be understood by a PHOSITA to be a signal error associated with the sensor, transmitter, or receiver by referencing a number of specification excerpts that reference wireless communications. (D.I. 156 at ¶¶ 19–24.) Abbott's expert argues that a PHOSITA would read those various passages and understand that wireless interference could cause any aspect of wireless communication to fail. (D.I. 156 at ¶ 25.) Thus, a PHOSITA would

understand a wireless interference to be a “failure mode condition.” (D.I. 156 at ¶ 25.) Abbott’s argument is more persuasive because the intrinsic evidence best supports including wireless interference within “failure mode conditions.” The specification describes many facets of wireless communication with precision. (D.I. 156 at ¶¶ 19–24.) (collecting and quoting those sections.) It follows that a PHOSITA would understand that wireless interference that causes a communication to fail would result in a “failure mode condition.” Further, as discussed previously, claims 2–4 and 15 of the ‘842 patent and claims 4–9 of the ‘653 patent suggest that a wireless communication error constitutes a “failure mode condition.” (D.I. 108, Exhibits A at 15:42–54; 16:50–53; Exhibit G at 16:4–20.)

In sum, I construe “failure mode condition” as used in the ‘842 and ‘653 patents to mean a “condition that adversely affects function.”

F. The ‘954 Patent

The ‘954 patent was issued on November 10, 2020, and is titled “Continuous Analyte Measurement Systems and Systems and Methods for Implanting Them.” (D.I. 108 at ¶ 39.) It is aimed at improving the user experience by removing user calibration, which “typically involve[ed] fingerstick measurements.” (D.I. 135 at 5.) Early CGMs suffered a phenomenon known as “drift,” defined as “a change over time to the relationship between the glucose concentration and the sensor signal.” (D.I. 135 at 5.) That drift necessitated repeated user re-calibration to reduce inaccuracies. (D.I. 135 at 5.) The ‘954 patent is generally directed to “continuous analyte monitoring systems

utilizing implantable or partially implantable analyte sensors which have a relatively small profile (as compared to currently available implantable sensors).” (D.I. 108, Exhibit B at 4:20–24.) It claims a continuous analyte measurement system comprising: a base unit mounted on the skin; an analyte sensor comprising of an enzyme chemically bound to a polymer with a portion that penetrates the surface of the skin; and a conductive member inside the base unit that makes electrical contact with the analyte sensor. (D.I. 108, Exhibit B at 34:62–35:16; 36:30–35.)

Abbott has asserted infringement of claims 1, 7 and 15–17 of the ‘954 patent. (D.I. 108 at ¶ 61.) Claim 1 is an independent claim. (D.I. 108, Exhibit B at 34:62–35:16.) The parties dispute only the term “chemically bonded” as used in the ‘954 patent. The patent uses the term, “chemically bonded” in dependent claims 17 and 20. (D.I. 108, Exhibit B at 36:34–35; 36:42–43.) Claim 17 claims an analyte-responsive enzyme “chemically bonded” to a polymer that is disposed upon the working electrode. (D.I. 108, Exhibit B at 36:34–35.) Claim 20 claims a mediator “chemically bonded” to a polymer disposed upon the working electrode. (D.I. 108, Exhibit B at 36:42–43.)

Abbott proposes the construction “bonded by attractive forces between atoms or molecules” for the term “chemically bonded.” (D.I. 135 at 30.) DexCom counters that Abbott’s proposal is “both insolubly vague and far broader than what the intrinsic or extrinsic evidence can support.” (D.I. 143 at 46.) DexCom proposes no construction is necessary and “chemically bonded” be given its plain and ordinary meaning, i.e., that it only includes ionic and covalent bonds. (D.I. 143 at 48.) In the alternative, DexCom

argues that if construction is warranted, then “chemically bonded” should be construed as “between two atoms or groups of atoms in the case that the forces acting between them are such as to lead to the formation of an aggregate with sufficient stability to make it convenient for the chemist to consider it as an independent ‘molecular species.’” (D.I. 143 at 48.) Essentially, Abbott’s construction includes all attractive forces between atoms and molecules, such as ionic and covalent bonding as well as weaker interactions such as hydrogen bonding and van der Waals forces, whereas DexCom’s proposed construction includes only ionic and covalent bonds. I will construe “chemically bonded” as used in the ‘954 patent to mean bonded by “ionic or covalent bonds” and to exclude weak atomic and molecular interactions.

“Chemically bonded” is a term that is generally understood to have different meanings depending on the context in which it is used. *Compare* (D.I. 146, Exhibit 111 at 174), *with* (D.I. 154 at ¶ 7) (providing a list of sources that equate various van der Waals forces and other weaker attractive forces with chemical bonds.) Abbott’s construction includes ionic and covalent bonds as well as weaker attractive forces; DexCom’s construction would limit “chemical bonds” to ionic and covalent bonds, eschewing weaker attractive forces.

The claims of the ‘954 patent by themselves are not dispositive. Independent claim 1 makes no mention of “chemically bonded.” (D.I. 108, Exhibit B at 34:62–35:16.) Rather, the term “chemically bonded” appears only in claims 17 and 20. (D.I. 108, Exhibit B at 36:34–35; 36:42–43.) Claim 17 depends upon claim 16, which itself is

dependent on claim 1. (D.I. 108, Exhibit B at 36:30–36.) Dependent claim 16 describes an “analyte-responsive enzyme bonded to a polymer.” (D.I. 108, Exhibit B at 36:32–33.) Claim 17 clarifies that the enzyme “is chemically bonded to the polymer.” (D.I. 108, Exhibit B at 36:35.) “Chemically bonded” appears once more in dependent claim 20, which depends upon claim 19, which in turn is dependent on claim 1. (D.I. 108, Exhibit B at 36:38–43.) Claim 19 describes “a plurality of electrodes including a working electrode comprising a mediator bonded to a polymer disposed on the working electrode.” (D.I. 108, Exhibit B at 36:38–41.) Claim 20 clarifies that “the mediator is chemically bonded to the polymer.” (D.I. 108, Exhibit B at 36:42–43.) That claim helps elucidate the meaning of “chemically bonded” as it directs attention to sections of the specification that prove helpful in interpreting the term’s meaning. Because terms should be construed consistently across a patent, it is informative to assess how the specification discusses different bond types throughout. *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 sections of the specification related to the subject matter captured by claim 17 provide support that “chemically bonded” is intended to encompass a narrower class of attractive forces than Abbott suggests. The specification teaches generally that the sensing element is “[a] glucose-sensing layer ... constructed by crosslinking together”: (1) a “redox polymer” and (2) an enzyme (“glucose oxidase”). (D.I. 108, Exhibit B at 18:42–47.) According to Abbott’s expert, that is the sensing element described in claim

17. (D.I. 138 at ¶ 43.) The ‘954 patent specification also describes “glucose oxidase enzyme molecules” which are “crosslinked together” with “Osmium-based mediator molecules ... anchored to a polymeric backbone.” (D.I. 108, Exhibit B at 18:13–18.) Abbott’s expert once again describes that as “an analyte-responsive enzyme chemically bonded to a polymer.” (D.I. 138 at ¶ 44.) The ‘954 patent’s specification contains several other examples of polymer and polymer-enzyme crosslinking. (D.I. 108, Exhibit B at 17:63–65; 18:33–37; 26:22–24; 26:39–46.) While Abbott’s expert initially seemed to characterize those crosslinked bonds as a unique subset of chemical bonds, (D.I. 138 at ¶¶ 39–45), DexCom’s points out that crosslinks are a subset of covalent bonds (D.I. 143 at 46–47). Abbott does not refute that assertion. *See* (D.I. 152.)

Other sections of the specification also support a narrower definition of “chemically bonded” than the one put forward by Abbott. The embodiment disclosed in the ‘954 patent describes “a redox species ... bound to a polymer[,]” in which that bond “may be covalent, coordinative, or ionic.”⁶ (D.I. 108, Exhibit B at 16:48–56.) And, when describing mediators, the specification includes examples that are bound covalently, coordinatively, and ionically. (D.I. 108, Exhibit B at 16:64–17:14.)

⁶ While the parties did not suggest a definition of “coordinative” bonds, it is my understanding that coordinate bonds are a sub-set of covalent bonds, wherein shared electrons in the bond originate from the same atom. *See* “Coordinate Valence” in McGraw-Hill Dictionary of Scientific and Technical Terms (sixth ed. 2003) (“A chemical bond between two atoms in which a shared pair of electrons forms the bond and the pair has been supplied by one of the two atoms. Also known as a coordinate bond ...”),

Abbott repeatedly relies on the definitions offered by its expert to support its construction of “bonded by attractive forces between atoms or molecules.” (D.I. 152 at 31–32.) It also argues that the nature of the bonds in question, crosslinking polymer bonds, further lends credence to their proposed construction. (D.I. 135 at 31–32.) Abbott contends that because the bonds in question involve not only attractive forces between atoms, but attractive forces between molecules, “chemically bonded” would be understood by a PHOSITA to mean “bonded by attractive forces between atoms or molecules.” (D.I. 135 at 31–32.) But, when taking intrinsic evidence into account, Abbott’s proposed construction is wanting because the ‘954 patent’s specification discusses only the stronger ionic and covalent bond types.

DexCom counters Abbott’s arguments by asserting that, as used in claims 17 and 20, “chemically bonded” applies in the “ordinary sense” of the term. (D.I. 143 at 46.) It responds to Abbott’s arguments regarding crosslinked bonds by stating that the crosslinking in the patent specification, which claim 17 relies upon, consists of covalent bonds. (D.I. 143 at 46–47.) As stated previously, that assertion is unrefuted.

While “claims must be read in view of the specification,” the Federal Circuit has expressly cautioned courts that “limitations from the specification are not to be read into the claims.” *Teleflex*, 299 F.3d at 1326. The Federal Circuit has also stated, however, that “where the specification makes clear at various points that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.” *Alloc*, 342 F.3d at 1370 (Fed. Cir. 2003) (citation omitted). Here,

because the specification repeatedly indicates that “chemically bonded” as applied in claims 17 and 20 is limited to ionic and covalent bonds, that is the construction I adopt.

G. The ‘647 Patent

The ‘647 patent was issued on March 16, 2021, and is titled “Analyte Sensor Transmitter Unit Configuration for a Data Monitoring and Management System.” (D.I. 108, Exhibit E at 1:1-5.) The insertion mechanism of some CGMs involves locking the sensor subassembly into a mount. (D.I. 135 at 3.) The ‘647 patent generally relates to a “[m]ethod and system for providing analyte sensor alignment and retention mechanism for improved connectivity with a transmitter unit for electrical connection[.]” (D.I. 108, Exhibit E at Abstract.) It claims “an insertion mechanism configured to position the sensor subassembly against the base of the transmitter mount by causing movement of the sensor subassembly until the locking mechanism engages the sensor subassembly[.]” whereby “[m]ovement of the sensor subassembly is impeded while the locking mechanism is engaged[.]” (D.I. 108, Exhibit E at 9:64–10:2.) The inserter assembly comprises a sensor subassembly, a transmitter mount, and an insertion mechanism. (D.I. 108, Exhibit E at 9:55–10:13.)

Abbott has asserted infringement of claims 1–3 and 11–14 of the ‘647 patent. (D.I. 108 at ¶ 61.) Claim 1 is the only independent claim. (D.I. 108, Exhibit E at 9:55–10:13.) The parties dispute only the term “insertion mechanism configured to position the sensor subassembly against the base of the transmitter mount by causing movement

of the sensor subassembly” as used in the ‘647 patent. That term appears only in claim 1. (D.I. 108, Exhibit E at 9:55–11:12.)

Abbott proposes that no construction is necessary and “insertion mechanism configured to position the sensor subassembly against the base of the transmitter mount by causing movement of the sensor subassembly” be given its plain and ordinary meaning. (D.I. 135, 33.) DexCom contends that the claim term “recites function without disclosing structure to perform that function” and is therefore “subject to means-plus-function construction under 35 U.S.C. § 112(f).” (D.I. 143 at 32.) DexCom proposes that the function is “positioning the sensor subassembly against the base of the transmitter mount by causing movement of the sensor subassembly” and that the corresponding structure is “none disclosed, or alternatively 420 in Figures 4D and 4E and 550 in Figure 5B” of the ‘647 patent’s specification. (D.I. 143 at 31–32.) I decline to construe this as a means-plus-function term, and, to the extent language of this sort can be said to have a plain and ordinary meaning, I agree that it should be so construed.

A claim element is in means-plus-function form when it claims what it does instead of what it is. *See* 35 U.S.C. § 112(f). “Use of the word ‘means’ creates a presumption that § 112[(f)] applies.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (quotation omitted). The absence of the word “means” creates the opposite presumption. *Id.* That latter presumption can be overcome only “if the challenger demonstrates that the claim term fails to ‘recite[] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that

function.” *Id.* at 1348 (citations omitted). Section 112(f) does not apply when a disputed term “is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.” *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017) (citation omitted).

DexCom argues that Abbott’s proposed construction recites word-for-word the function that the element in the term performs. (D.I. 143 at 32.) It further asserts that the “nonce words doctrine” applies to overcome the presumption that the claim is not a means-plus-function claim because the term lacks the word “means.” (D.I. 143 at 33.) (citing *Williamson*, 792 F.3d at 1350 (“Generic terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’ and therefore may invoke § 112[(f)].”) (citation omitted).) According to DexCom, Abbott’s expert fails to prove that a PHOSITA would understand that an insertion mechanism connotes a specific structure, and that its expert confirms insertion mechanism “is a generic label for a collection of parts.” (D.I. 143 at 33.)

DexCom argues that there is no corresponding structure disclosed in the specification that performs the desired function, or, alternatively, that the disclosed structure should be limited to what is shown in Figures 4D and 4E at 420 and Figure 5B at 550. (D.I. 143 at 36.) Those figures, DexCom says, are the only link between the

structure and the “claim-recited function.” (D.I. 159 at 10.) DexCom’s argument rests on the principle that a PHOSITA must be able to understand the specification to disclose the structure in question. *Elektro AB*, 344 F.3d at 1212 (“It is important to determine whether [a PHOSITA] would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing that structure.”).

The claim and specification tend to show that the term describes a class of structures whose purpose is the positioning of a sensor. The ‘647 patent specification discloses multiple embodiments of possible insertion mechanisms. (D.I. 108, Exhibit E at Figs. 4B, 4D, 4E, and 5B; 6:23–67 (identifying elements 420 and 550 as an “insertion mechanism”); 6:47–51; 6:58–67.) Those passages indicate that an “insertion mechanism” would be understood by a PHOSITA to mean “a class of structures for inserting a sensor into position for use, including positioning a portion of the transcutaneous sensor through the skin.” (D.I. 135 at 33.) (citing D.I. 136 at ¶ 152.) The remainder of the disputed term does not recite function, but instead discloses additional structural components using terminology that would be readily understood by a PHOSITA. (D.I. 135 at 33.) Claim 1 of the ‘647 patent describes a “sensor subassembly” as comprising “an analyte sensor and a sensor seal,” both of which Abbott’s expert testified a PHOSITA would be familiar with. (D.I. 108, Exhibit E at 9:56–57; D.I. 136 at ¶ 160.) The specification also describes a “transmitter mount” used to hold a sensor in place, which would similarly be understood by a PHOSITA. (D.I. 108, Exhibit E at 6:22–7:23, Figs. 4C–4E, 5A–5C, 6A–6D; D.I. 136 at ¶ 161.) I conclude that

DexCom has not overcome the presumption that this claim falls outside of § 112 because it has not demonstrated that the claim term fails to ‘recite[] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Williamson*, 792 F.3d at 1348.

The extrinsic evidence boils down to the proverbial battle of the experts over whether the term describes structure, (D.I. 136 at ¶¶ 152–62), or merely recites function absent structure, (D.I. 144 at ¶¶ 99–107), with Abbott’s expert arguing the former and DexCom’s the latter. Overall, I think the extrinsic evidence more persuasively shows that a PHOSITA would understand “insertion mechanism” to comprise a class of structures for inserting a sensor into position for use. (D.I. 135 at 35–37; D.I. 136 at ¶¶ 152–58, 167–75.) While DexCom and its expert argue that the patents described by Abbott’s expert teach a variety of structures not linked definitively, (D.I. 143 at 32–33; D.I. 144 at 99–107), this variety is properly described as a class of structures understood by a PHOSITA as designed to insert a sensor into position for use. (D.I. 135 at 35–37; D.I. 136 at ¶¶ 152–58, 167–75; D.I. 152 at 34.) Even DexCom’s expert admits that the variety of “insertion mechanisms” cited have the purpose of “insert[ing] a sensor into position for use.” (D.I. 144 at ¶ 105.) As “insertion mechanism” sufficiently describes a class of structures, § 112(f) is not invoked. *Skky*, 859 F.3d at 1019 (“To determine whether a claim recites sufficient structure, it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by

their function.”) (cleaned up); *see also Blackbird Tech LLC v. ELB Elecs.*, 2016 WL 7451622, *5 (D. Del. Dec. 28, 2016) (“‘Fastening mechanism’ is sufficient structure even though it invokes a class of structures, rather than a specific structure, and it uses a functional name to do so.”).

Accordingly, the term “insertion mechanism configured to position the sensor subassembly against the base of the transmitter mount by causing movement of the sensor subassembly” as used in the ‘647 patent is not a means-plus-function claim and will be afforded its plain and ordinary meaning.

IV. CONCLUSION

For the reasons stated herein, I construe the terms at issue as described above and in the accompanying order.