UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

Before The Honorable Dee Lord
Administrative Law Judge

In the Matter of **CERTAIN TONER CARTRIDGES AND COMPONENTS THEREOF**	Investigation No. 337-TA-1106

CANON'S INITIAL *MARKMAN* BRIEF

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I. INTRODUCTION

Complainants Canon Inc., Canon U.S.A., Inc., and Canon Virginia, Inc. (collectively, "Canon") requested this investigation to remedy widespread violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, based on Respondents' unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of toner cartridges (including the drum units contained therein) that infringe one or more of seven U.S. patents (collectively, "Asserted Patents") owned by Canon Inc. Currently at issue are the asserted and domestic industry claims listed below (independent claims are shown in bold):

U.S. Patent No.	Short Name	Asserted Claims	Domestic Industry Claims
9,746,826	'826 patent	**1**, 2, **6**	**1**, 5
9,836,021	'021 patent	**1**, 2, 4, 7, **8**, 10, 13, **18**, 20	**1**, 6
9,841,729	'729 patent	**1**, 3, 8, **9**, 11, 16, 17, **18**, 20, 26	**27**, 31
9,857,764	'764 patent	**7**, 9	**20**, 22
9,857,765	'765 patent	**1**, 3, **4**, 6, **13**, 16, 19	**13**, 18
9,869,960	'960 patent	**1**, 2, 4-6	**1**, 8
9,874,846	'846 patent	**1**, 3	**1**, 4

There are five claim terms in dispute, all of which appear in the claims of multiple Asserted Patents.[1]

All of the asserted and domestic industry claims are directed to a toner cartridge or drum unit that has a movable part—called a "coupling member"—for interfacing with the printer. The movability of the coupling member is described with plain English words being used in their ordinary sense (such as for example the word "movable" itself) and the parties have no dispute

[1] Ground Rule 5.2.2 states that when there are multiple patents at issue, *Markman* briefs should be organized by patent. Here, because all of the disputed claim terms appear in multiple Asserted Patents, and because the Asserted Patents share a common specification, Canon has organized its brief by term rather than patent.

over what any of those words mean. Instead, the claim construction dispute centers around the Respondents' and Staff's improper efforts to limit the scope of the claims to a single kind of movability—one in which the coupling member inclines or pivots—even though the independent claims never mention inclining or pivoting and even though the kind of movability that the claim language describes indisputably encompasses other kinds of movement, such as movement in a straight line. Respondents' and Staff's positions are based entirely on the "cardinal sin" of claim construction, namely, importing embodiments from the written description into the claims. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002) (quoting *SciMed Life Sys., Inc. v. Adv. Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001)).

The parties' dispute with respect to the one-word claim term "connected" is illustrative. Many of the claims at issue use this plain English word to describe that the coupling member is connected to another component of the toner cartridge, called the photosensitive drum. Because the word "connected" has a commonly understood meaning, and because there is no dispute about what is connected to what, Canon's positon is that the term should be given its plain and ordinary meaning, and no construction is required. Respondents and Staff, on the other hand, advance that the word "connected" should be redefined to mean "connected in a manner that enables the claimed movement between the co-axial and inclined positions." In so doing, Respondents and Staff concede that the word "connected" has a plain and ordinary meaning (since they are using the very word they are trying to construe in their own construction), and are adding on an additional limitation that has no grounding in the language of the claim.

The Federal Circuit has made it plain that claims may be construed in a manner that deviates from their ordinary and customary meaning only if (1) the patentee set out a definition and acted as his own lexicographer or (2) the patentee disavowed the full scope of a claim term

either in the specification or during prosecution. *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Both the lexicographer and the disavowal standards are "exacting" ones, *id.* at 1366, and Respondents and Staff cannot make a case for either here. All five terms in dispute use ordinary words whose meanings are clear, and all should be accorded their plain and ordinary meanings.

II. THE ASSERTED PATENTS[2]

The Asserted Patents describe innovations relating to a process cartridge, also known as a toner cartridge, for use in an electrophotographic image forming apparatus, such as a laser beam printer. At a basic level, a laser beam printer works by depositing and fusing onto paper a fine, powdery substance called "toner." In operation, a continuously rotating, photosensitive drum is exposed to a laser beam, which is scanned across the drum in a pattern that corresponds to the image to be printed. '765 patent at 11:1-9. The laser beam forms a latent image on the drum, and, as the drum rotates, toner first adheres to the drum and next is deposited on the paper, in a manner that corresponds to the latent image. *Id.* at 11:9-21.

Because toner is consumed each time an image is printed, from time to time the toner supply must be replenished. So that users can replenish their own toner, manufacturers typically supply toner in the form of a toner cartridge that can be installed in the printer whenever a fresh supply of toner is needed. In addition to containing toner, a toner cartridge typically contains a rotatable photosensitive drum and other components, such as a rotatable developing roller that

[2] A copy of the '826 patent is attached as Exhibit 1; a copy of the '021 patent is attached as Exhibit 2; a copy of the '729 patent is attached as Exhibit 3; a copy of the '764 patent is attached as Exhibit 4; a copy of the '765 patent is attached as Exhibit 5; a copy of the '960 patent is attached as Exhibit 6; and a copy of the '846 patent is attached as Exhibit 7. Because each Asserted Patent has the same specification, for consistency, the parties have agreed to cite only to the '765 patent when citing to the specification.

transfers toner to the drum. The force necessary to rotate the rotating components of the toner cartridge is provided by a motor in the printer. Because the toner cartridge is a replaceable, separate assembly relative to the printer and the motor is situated in the printer, a detachable coupling between the toner cartridge and the printer is necessary in order to transmit the motor's driving force to the cartridge and yet permit the cartridge to be easily installed and removed.

One conventional way to couple a cartridge and a printer is to use a stationary twisted projection 17a at one end of the photosensitive drum 7 and a twisted hole 18a in a driving shaft 18 of the printer, such as shown in FIG. 11 of U.S. Patent No. 5,903,803,[3] reproduced below. '765 patent at 1:46-60. The printer motor rotates the shaft 18 and the twisted hole 18a, and the twisted hole engages the twisted projection 17a to transmit rotational driving force to the drum 7. *Id.* at 1:61-2:2. This arrangement works well, but requires the printer to have a mechanism for moving the twisted hole toward the twisted projection when the printer cover is closed, so that the hole can engage the projection. *Id.* at 2:7-24.

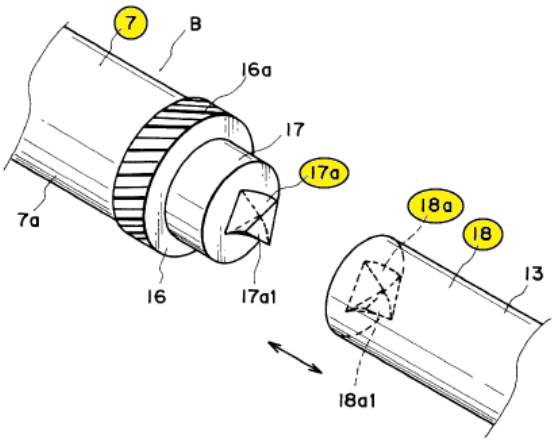
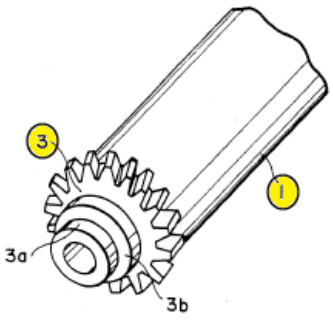


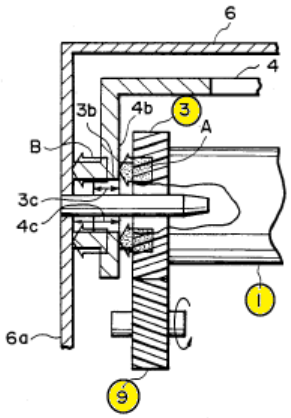
FIG. 11

[3] The '803 patent was the subject of two previous Commission investigations, namely, 337-TA-731 and 337-TA-829. The Asserted Patents here are unrelated to the patents at issue in those prior investigations.

Another conventional way to transmit driving force from a printer to a photosensitive drum is to use a helical gear 3 at one end of the drum 1 and another helical gear 9 in the printer, such as shown in FIGS. 3 and 4 of U.S. Patent No. 4,829,335, reproduced below. '765 patent at 2:3-6. The printer motor rotates the printer gear 9, and rotational force is transmitted to the drum 1 through engagement of the printer gear 9 with the drum gear 3. This arrangement allows the cartridge to be installed in and removed from the printer in a direction perpendicular to the axis about which the drum rotates without requiring the gear of the printer to move toward and away from the drum in response to the closing and opening of the printer cover, but rotation of the drum is not as uniform as it is with the arrangement disclosed in U.S. Patent No. 5,903,803. *Id.* at 25-34.



F I G. 3



F I G. 4

The Asserted Patents take a different approach, and achieve the advantages of the aforementioned driving mechanisms, without the drawbacks. The patented technology at issue here achieves its objectives through the innovative use of a movable coupling member provided at the end of the photosensitive drum. Like the stationary twisted projection in the prior art '803 patent, the coupling member in the present invention can receive rotational driving force from

the printer and transmit that driving force to the drum. But because the coupling member of the present invention is connected to the photosensitive drum in a way that allows it to move, it can engage with and disengage from a drive shaft in the printer, without requiring the drive shaft to move toward and away from the drum in response to the closing and opening of the printer cover.

One example of such movement by the coupling member is described in Embodiment 1 of the Asserted Patents, as illustrated in FIGS. 21 and 22, reproduced below. For ease of reference, the coupling member 150 is colored blue, the photosensitive drum shaft 153 is colored green, and the printer drive shaft 180 is colored red. The cartridge is inserted into the printer in the direction X4, which direction is perpendicular to the printer drive shaft 180.[4] In this embodiment, the coupling member begins in a position in which it is inclined relative to the photosensitive drum shaft 153 (as shown in FIG. 22(a)). '765 patent at 26:55-63. As the cartridge is inserted into the printer, the coupling member moves from that inclined position to a position in which it is coaxial with the drum shaft (shown in FIG. 22(d)). *Id.* at 27:15-40. This motion of the coupling member enables the cartridge to be inserted into the printer and the coupling member to engage the printer drive shaft without requiring the drive shaft to move toward and away from the drum in response to the closing and opening of the printer cover.

[4] As indicated by the arrow at the top of FIG. 22(a), the direction X4 is from left to right, looking at the page.

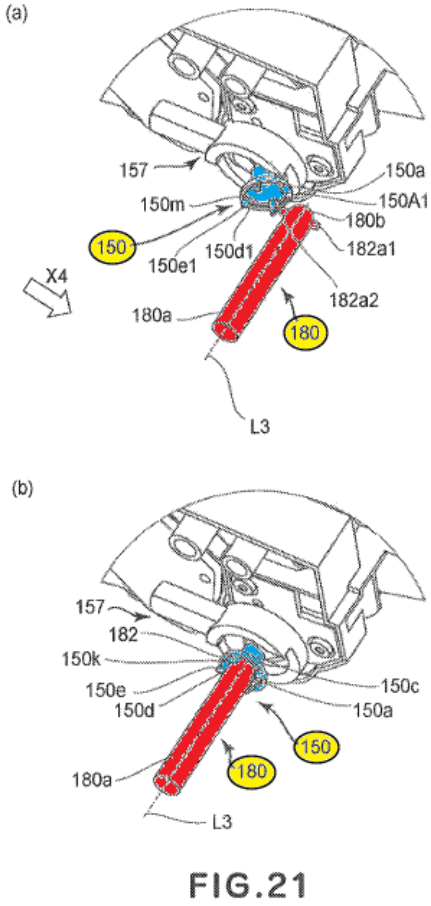


FIG.21

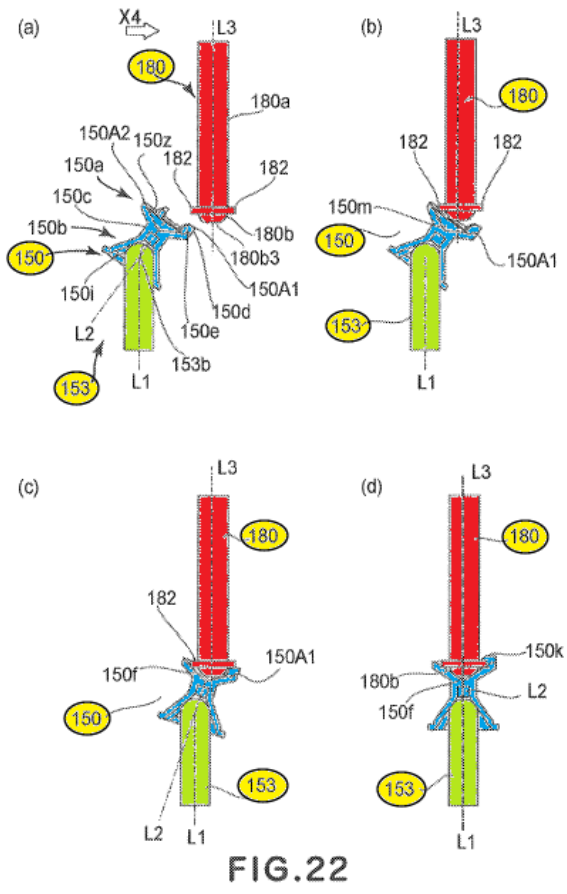


FIG.22

Embodiment 13 of the Asserted Patents provides an alternative configuration for the coupling member, which moves in a different way. This embodiment is described with reference to FIGS. 86, 87, 88(b), and 88(c), reproduced below.[5] Here again, the cartridge is inserted into the printer in the direction X4, which is perpendicular to the printer drive shaft 180.[6] But in this case, the coupling member 10150 begins not in an inclined position, but rather in a position in which it is coaxial with the photosensitive drum shaft 10153. *Id.* at 62:58-62. And here, as the

[5] The configuration shown in FIG. 88(a) is Embodiment 1, which the specification contrasts with Embodiment 13. *See* '765 patent at 62:43-63:24.

[6] In the case of the Embodiment 13 drawings, the direction X4 is from top to bottom, as indicated by the arrows in FIGS. 88(b) and (c).

cartridge is inserted into the printer, the coupling member retracts in the longitudinal direction X11, along the axis of the drum shaft, as shown in FIG. 88(b). *Id.* at 62:62-63:1. This longitudinal retraction may be followed by a clockwise rotation of the coupling member as it abuts the drum shaft, as shown in FIG. 88(c). *Id.* at 63:2-6. Like the motion of the Embodiment 1 coupling member, the motion of a coupling member constructed in accordance with Embodiment 13 allows the cartridge to be installed in a printer without requiring the drive shaft to move toward and away from the drum in response to the closing and opening of the printer cover.

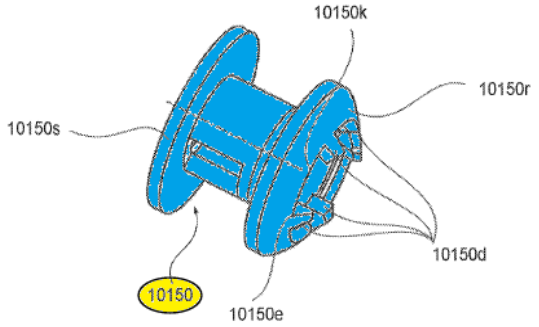


FIG.86

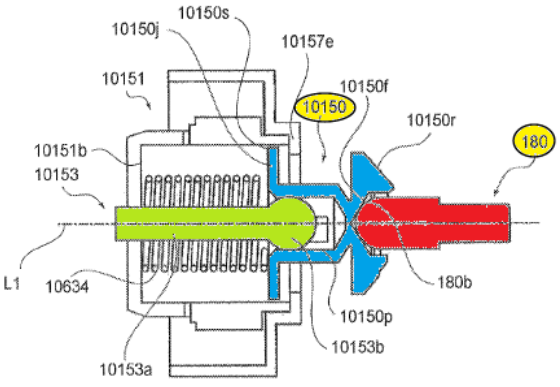


FIG.87

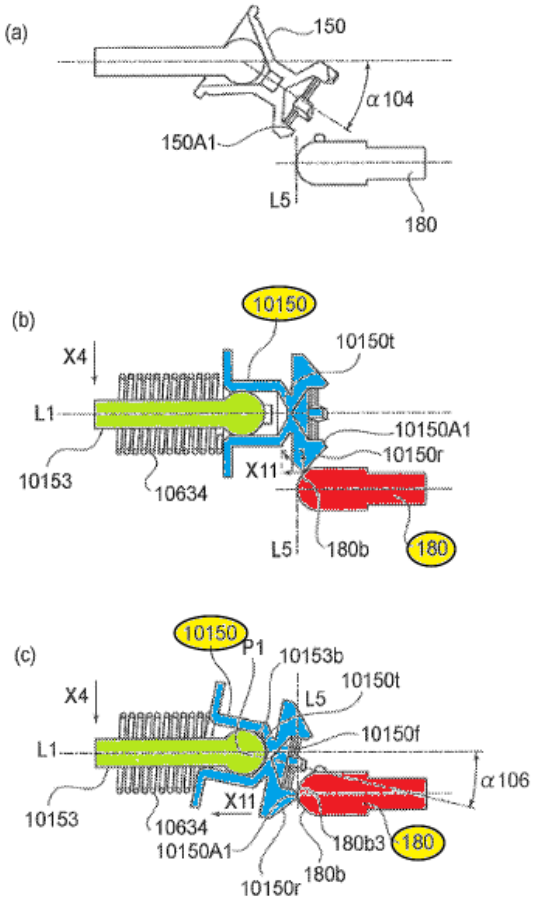


FIG.88

The Asserted Claims are directed to either a process cartridge or a drum unit that is usable in a process cartridge. The claimed cartridge and drum unit include, among other things, a coupling member that is movable between (i) a first position in which a tip of the at least one projection is a first distance away from the photosensitive drum as measured in the direction of the axis L1 and (ii) a second position in which the tip of the at least one projection is a second, shorter distance away from the photosensitive drum as measured in the direction of the axis L1. That kind of movability is exhibited by coupling members constructed in accordance with both Embodiment 1 and Embodiment 13 described above, as well as other embodiments of the Asserted Patents. Because the second distance is shorter than the first distance, cartridges including such a movable coupling member can be installed in and removed from a printer in a direction that is perpendicular to the axis of the printer drive shaft without requiring the drive shaft to move toward and away from the drum in response to the closing and opening of the printer cover.

III. CLAIM CONSTRUCTION LAW

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). "[T]he claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim," and "the resulting claim interpretation must, in the end, accord with the words chosen by the patentee to stake out the boundary of the claimed property." *Renishaw PLC v. Marposs S.p.A.*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. *Phillips*, 415 F.3d at 1312-13. "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. Thus, the court need not construe "commonly used terms" that are "used in common parlance and ha[ve] no special meaning in the art." *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015). There is nothing improper about finding that a claim term or phrase has its plain meaning and leaving it at that. *See, e.g.*, *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (rejecting argument that district court shirked its responsibility to construe a disputed claim term where it rejected the defendant's construction and adopted "plain and ordinary meaning"); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("The *Markman* decisions do not hold that the trial judge must repeat or restate every claim term in order to comply with the ruling that claim construction is for the court. Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.").

When construing claims, "the intrinsic evidence and particularly the claim language are the primary resources." *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009). Intrinsic evidence is the evidence in the public record of the patent, and includes the claims, the patent specification, and, if in evidence, the prosecution history. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Often, "the claims themselves provide

substantial guidance as to the meaning of particular claim terms." *Phillips*, 415 F.3d at 1314. For example, "the 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.* "Differences among claims can also be a useful guide in understanding the meaning of particular claim terms." *Id.* By way of example, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15.

Claims also must be read in light of the specification, which is "the single best guide to the meaning of a disputed term." *Id.* at 1315 (citation and internal quotation marks omitted). In addition to the claims and the specification, the prosecution history should be considered, if it is in evidence. *Id.* at 1317. "The prosecution history … consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent. Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Id.* (citations omitted).

The Federal Circuit has repeatedly cautioned against the "'cardinal sin'" of claim construction—"importing limitations from the written description into the claims." *Teleflex*, 299 F.3d at 1324 (quoting *SciMed*, 242 F.3d at 1340). While courts should consider all of the intrinsic evidence, including the claims themselves, the specification, and, where appropriate, the prosecution history, "a claim construction must not import limitations from the specification into the claims." *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1354 (Fed. Cir. 2012); *see also Kara Tech.*, 582 F.3d at 1348 ("The claims, not specification embodiments, define the scope of patent protection. The patentee is entitled to the full scope of his claims, and we will not limit

him to his preferred embodiment or import a limitation from the specification into the claims."). "[I]t is well-settled that device claims are not limited to devices which operate precisely as the embodiments described in detail in the patent." *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 866 (Fed. Cir. 1997).

To avoid the "cardinal sin" of improperly importing undue limitations, claims can only be construed in a manner that deviates from their ordinary and customary meaning if (1) the patentee set out a definition and acted as his own lexicographer or (2) the patentee disavowed the full scope of a claim term either in the specification or during prosecution. *Thorner*, 669 F.3d at 1365; *see also Unwired Planet, LLC v. Apple Inc.*, 829 F.3d 1353, 1358 (Fed. Cir. 2016) (citing *Thorner*). Both lexicography and disavowal are judged by an "exacting" standard. *Thorner*, 669 F.3d at 1366.

"To act as its own lexicographer, a patentee must 'clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning." *Id.* at 1365 (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). "It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must clearly express an intent to redefine the term." *Thorner*, 669 F.3d at 1365 (internal quotations marks and citation omitted); *see also Phillips*, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.").

"The standard for disavowal of claim scope is similarly exacting" and requires that the specification or prosecution history "mak[e] clear that the invention does not include a particular feature." *Thorner*, 669 F.3d at 1366 (internal quotation marks and citation omitted). Again, "[i]t is … not enough that the only embodiments, or all of the embodiments, contain a particular

limitation." *Id.* As the Federal Circuit has repeatedly stated: "We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that." *Id.*

Though generally "less reliable than the patent and its prosecution history," judges also may consider extrinsic evidence. *Phillips*, 415 F.3d at 1318. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). "[W]hile extrinsic evidence can shed useful light on the relevant art, … it is less significant than the intrinsic record in determining the legally operative meaning of claim language." *Phillips*, 415 F.3d at 1317 (citation and internal quotation marks omitted). Under no circumstances may extrinsic evidence be used "to vary or contradict the manifest meaning of the claims" as deduced from the intrinsic evidence. *Vitronics*, 90 F.3d at 1585.

At the end of the day, "[i]t is the claims that define the metes and bounds of the patentee's invention." *Thorner*, 669 F.3d at 1367. "The patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope." *Id.*; *see also Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) ("Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.").

IV. THE PERSON OF ORDINARY SKILL IN THE ART

Canon and Respondents have proposed the following definitions of the person of ordinary skill in the art:

Canon's Proposed Definition	Respondents' Proposed Definition
In and around the 2006 time frame, a person of ordinary skill in the art to whom the Asserted Patents are addressed would have had a level of knowledge roughly equivalent to that of a person holding a bachelor's degree in mechanical engineering and would have had a general understanding of mechanical design principles. The person also would have had about two years of experience in design work related to toner cartridges for laser printers, or would have had persons with such experience available to work with him.	In and around the 2006 time frame, a person of ordinary skill in the art to whom the Asserted Patents are addressed would have had either (1) a Bachelors degree in Mechanical Engineering or an equivalent degree, and 1-2 years of experience in design work related to technology involving the transmission of forces between components to maintain a consistent velocity, or (2) at least a Masters degree in Mechanical Engineering or an equivalent degree, and a general understanding of mechanical design principles.

For present purposes, the parties all agree that the claim construction issues to be decided do not depend on whose definition is adopted, and agree that it is not necessary for the ALJ to address the differences between the parties' proposed definitions at this time. Canon expects that the parties' respective positions regarding the person of ordinary skill in the art will be more fully developed through expert discovery.

V. AGREED-UPON CONSTRUCTIONS

The parties agree on the following construction for the term "as measured in the direction of the axis L1," which appears in each independent claim at issue and is part of disputed term 1 discussed below in Section VI.A.:

Term	Agreed-Upon Construction
"as measured in the direction of the axis L1"	as measured along an imaginary extension of axis L1 or an imaginary line parallel thereto
Claims: **'826**: 1, 6; **'021**: 1, 8, 18; **'729**: 1, 9, 18, 27; **'764**: 7, 20; **'765**: 1, 4, 13; **'960**: 1; **'846**: 1	

The parties also agree on the following construction for the term "when the coupling member takes the first position," which appears in independent claim 6 of the '826 patent:

Term	Agreed Construction
"when the coupling member takes the first position"	when the coupling member is in the first position, wherein "first position" has the same meaning that it has in term 1
Claim: **'826**: 6	

VI. DISPUTED CLAIM TERMS

There are five disputed claim terms, all of which are written in plain English rather than technical jargon. No party intends to present expert testimony during claim construction to establish that the disputed claim terms have a specialized meaning to a person of ordinary skill in the art that differs from their ordinary, non-technical meaning. And neither Respondents nor Staff can demonstrate that Canon acted as its own lexicographer and set out its own definition of any of the disputed claim terms or disavowed the full scope of any terms. Because there is no lexicography or disavowal, the terms should be given their plain and ordinary meaning.

A. Term 1: "wherein the coupling member is movable between (i) a first position in which a tip of the at least one projection is a first distance away from the photosensitive drum as measured in the direction of the axis L1 and (ii) a second position in which the tip of the at least one projection is a second distance away from the photosensitive drum as measured in the direction of the axis L1"

Canon's Proposed Construction[7]	Respondents' Proposed Construction	Staff's Proposed Construction
This term has its plain and ordinary meaning and no construction is necessary. The plain and ordinary meaning does not require the coupling member to pivot or incline when moving between the first and second positions. The plain and ordinary meaning also does not require the claimed "first position" to be "a substantially co-axial engaged position" and the claimed "second position" to be "an inclined pre-engagement position or disengagement position."	wherein the coupling member is pivotable between (i) a substantially co-axial engaged position in which a tip of the at least one projection is a first distance away from the photosensitive drum (as measured along L2 which is substantially in line with L1) and (ii) one of an inclined pre-engagement position or disengagement position in which the tip of the at least one projection is a second distance away from the photosensitive drum (as measured along imaginary extended L1 because L2 is no longer coaxial)	Wherein the coupling member is movable between (i) a substantially co-axial engaged position in which a tip of the at least one projection is a first distance away from the photosensitive drum (*e.g.* measure along L2 which is substantially in line with L1) and (ii) one of an inclined pre-engagement position or disengagement position, in which a tip of the at least one projection is a second distance away from the photosensitive drum (*e.g.* measure along imaginary extended L1 because L2 no longer co-axial)
Claims: **'826**: 1, 6; **'021**: 1, 8, 18; **'729**: 1, 9, 18, 27; **'764**: 7, 20; **'765**: 1, 4, 13; **'960**: 1; **'846**: 1		

Each independent claim at issue recites "wherein the coupling member is movable between (i) a first position in which a tip of the at least one projection is a first distance away from the photosensitive drum as measured in the direction of the axis L1 and (ii) a second position in which the tip of the at least one projection is a second distance away from the photosensitive drum as measured in the direction of the axis L1." '826 patent, claims 1 and 6;

[7] At Staff's request, wherever Canon has proposed plain and ordinary meaning, Canon's proposed construction identifies aspects of Respondents' and Staff's constructions that deviate from the plain and ordinary meaning.

’021 patent, claims 1, 8, and 18; ’729 patent, claims 1, 9, and 18; ’764 patent, claim 7; ’765 patent, claims 1, 4, and 13; ’960 patent, claim 1, and ’846 patent, claim 1. Although not part of the disputed claim language, each independent claim goes on to further describe the first and second positions by requiring that “the first distance be[] greater than the second distance.” *Id.*; *see also ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“While certain terms may be at the center of the claim construction debate, the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.”).

Term 1 consists entirely of non-technical words that are understandable and used in their ordinary sense. *See Summit 6*, 802 F.3d at 1291 (holding that courts need not construe “commonly used terms” that are “used in common parlance and ha[ve] no special meaning in the art”). Notably, the parties have no dispute as to the meaning of any of the words in this claim term—such as “tip,” “projection,” or axis”—and neither Respondents nor Staff contend that the term as a whole is not readily understandable.

Stated more concisely, this term, together with the additional description of the first and second positions that follows it, requires that the coupling member be capable of moving in such a way that the tip of its at least one projection is closer to the photosensitive drum in one position (the second position) than it is in another position (the first position) as measured in the direction of the axis L1.[8] This can be accomplished, for example, if the coupling member pivots relative to the drum, retracts toward the drum, or both pivots and retracts. All of these types of movements allow a cartridge to be installed in a printer in a direction perpendicular to the axis of

[8] As noted in Section V above, the parties agree that the phrase “as measured in the direction of the axis L1” means “as measured along an imaginary extension of axis L1 or an imaginary line parallel thereto.”

the printer drive shaft without requiring the drive shaft to move toward and away from the drum in response to the closing and opening of the printer cover, and the plain and ordinary meaning of term 1 encompasses all such movements.

Respondents and Staff, by contrast, urge the ALJ to restrict term 1 to coupling members that pivot between a "substantially co-axial engaged position" and "one of an inclined pre-engagement position or disengagement position." But neither term 1 nor any other language in the independent claims states—or even so much as implies—that the coupling member must be pivotable, that the claimed first position must be a "substantially co-axial engaged position," or that the claimed second position must be "one of an inclined pre-engagement position or disengagement position." Instead, the independent claims merely require that the coupling member be movable between a first position and a second position meeting the description in the claims (*i.e.*, the tip of the at least one projection must be closer to the photosensitive drum in the second position than it is in the first position as measured in the direction of the axis L1).

In their proposed constructions, Respondents and Staff redefine common, non-technical words such as "movable," "first position," and "second position" with narrower, less clear terminology.[9] They do so not to explain what the claim language means, but to narrow its scope and limit the claims to certain preferred embodiments described in the specifications of the Asserted Patents. This is the "cardinal sin" of claim construction. *Teleflex*, 299 F.3d at 1324. Absent a clear disavowal or contrary definition in the specification or the prosecution history—

[9] For example, as written, one can read the claims and determine whether a cartridge infringes simply by examining the cartridge alone. Under Respondents' and Staff's proposed constructions, one would need to observe the cartridge while inside a printer in order to determine exactly at what points the coupling member is in each of an "engaged position," a "pre-engagement position," and a "disengagement position."

which are lacking here—Canon is entitled to the full scope of its claim language. *See Thorner*, 669 F.3d at 1367; *Home Diagnostics*, 381 F.3d at 1358.

Respondents' and Staff's proposed constructions are not only unwarranted by the intrinsic evidence, they are contradicted by it. Every one of the independent claims at issue has a claim that depends from it and recites, in pertinent part:

> wherein the coupling member is movable between (i) a position in which the axis L2 of the coupling member is coaxial with the axis L1 of the photosensitive drum and (ii) an inclined position in which the axis L2 of the coupling member is inclined with respect to the axis L1 of the photosensitive drum.

'826 patent, claims 5 and 8 (depending from independent claims 1 and 6, respectively); '021 patent, claims 6, 12, and 19 (depending from independent claims 1, 8, and 18, respectively); '729 patent, claims 7, 15, 25, and 31 (depending from independent claims 1, 9, 18, and 27, respectively); '764 patent, claims 12 and 22 (depending from independent claims 7 and 20, respectively); '765 patent, claims 2, 5, and 18 (depending from independent claims 1, 4, and 13, respectively); '960 patent, claim 8 (depending from independent claim 1); '846 patent, claim 4 (depending from independent claim 1). The fact that there are dependent claims that expressly recite essentially the same limitations that Respondents' and Staff's proposed constructions would impose upon the independent claims gives rise to a presumption that those limitations are not present in the independent claims. *See Phillips*, 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.").

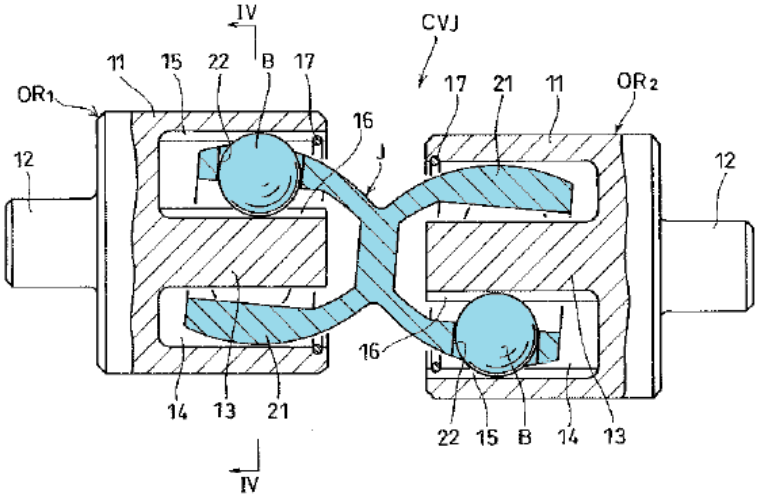
Further, these dependent claims demonstrate that when Canon intended to claim a coupling member that is movable between coaxial and inclined positions, it said so expressly, and when it did not intend to do so, it used the term 1 language. *See Unwired Planet*, 829 F.3d at

1358-59 ("Moreover, the patent contains other claims, for example claim 21, that specifically recite 'establishing a voice communication channel,' a limitation not present in the asserted claims. If the patentee intended to restrict the claims-at-issue to require a voice input to travel over a particular type of channel, it could have included that same limitation.").

The prosecution histories of three of the Asserted Patents also demonstrate that Respondents' and Staff's proposed constructions are unduly limiting. During the prosecution of the '021, '729, and '765 patents, the PTO examiner initially rejected several independent claims containing term 1 based on a prior art reference, JP 2006-163232 (Ohashi).[10] Specifically, the examiner asserted that joint J of Ohashi (shaded blue in the figure below) is a coupling member, which is "movable between (i) a first position (position of joint J shown in Figure 3) in which a tip of the at least one projection (B) is a first distance away from the photosensitive drum (1) as measured in the direction of the axis L1 and (ii) a second position (position of joint J when the axis of joint J and drum 1 are aligned) in which the tip of the at least one projection (B) is a second distance away from the photosensitive drum (1) as measured in the direction of the axis L1, with the first distance being greater than the second distance (when joint J is at an angle with respect to an axis of drum 1, a distance from a tip of ball B to drum 1 is greater than when joint J is aligned with the axis of drum 1; fig. 3 and ¶ [0029])." Ex. 8 at CAN0003937-38 (rejecting application claim 184, which eventually issued as claim 1 of the '021 patent), CAN0003939-40 (rejecting application claim 191, which eventually issued as claim 8 of the '021 patent), and CAN0003941-42 (rejecting application claim 199, which eventually issued as claim 18 of the

[10] Copies of relevant excerpts from the '021, '729, and '765 prosecution histories (including the Ohashi reference and an English translation thereof) are attached as Exhibits 8, 9, and 10, respectively. Full certified copies of the prosecution histories of the '021, '729, and '765 patents were filed as Exhibits 2, 5, and 7 to Canon's complaint, respectively.

’021 patent); Ex. 9 at CAN0008855-56 (rejecting application claim 184, which eventually issued as claim 1 of the ’729 patent) and CAN0008856-57 (rejecting application claim 198, which eventually issued as claim 18 of the ’729 patent); Ex. 10 at CAN0012273-74 (rejecting application claim 184, which eventually issued as claim 1 of the ’765 patent), CAN0012275-76 (rejecting application claim 186, which eventually issued as claim 4 of the ’765 patent), and CAN0012277-78 (rejecting application claim 194, which eventually issued as claim 13 of the ’765 patent).



Notably, in making her rejection, the examiner asserted that Ohashi satisfies the claimed first position “when joint J is at an angle with respect to an axis of drum 1” (the drum is shown in Figure 2 of Ohashi), and satisfies the claimed second position “when the axis of joint J and drum 1 are aligned.” *Id.* This is exactly the opposite of what Respondents and Staff propose; they define the first position to be a “substantially co-axial engaged position” and the second position to be “one of an inclined pre-engagement position or disengagement position.” Respondents’ and Staff’s proposed constructions therefore are irreconcilable with the examiner’s understanding of term 1 as evidenced by the prosecution histories, which understanding Canon

never disputed.[11] This is further evidence that Respondents' and Staff's proposed constructions are incorrect. *See Phillips*, 415 F.3d at 1317 ("[T]he prosecution history provides evidence of how the PTO and the inventor understood the patent."); *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984) ("[E]xaminers … are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art ….").

In sum, term 1 consists of non-technical words used in their ordinary sense, and the parties have no disputes about what those words mean. The term has its plain and ordinary meaning and no construction is necessary.

B. Term 2: "axis L2"

Canon's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
This term has its plain and ordinary meaning and no construction is necessary. The plain and ordinary meaning does not require axis L2 to be inclinable relative to axis L1. Alternatively: an imaginary line about which the coupling member is rotatable	axis along the center of the coupling member that inclines in relation to L1 during pre-engagement and disengagement	axis along center of the coupling member that inclines in relation to L1 during pre-engagement and disengagement
Claims: **'826**: 1, 5, 6; **'021**: 1, 2, 6, 8, 18; **'729**: 1, 9, 18, 27, 31; **'764**: 7, 20, 22; **'765**: 1, 4, 13, 18; **'960**: 1, 4, 8; **'846**: 1, 3, 4		

The dispute over term 2 is similar to the dispute over term 1, except here Respondents and Staff attempt to import the same inclinable limitation from the specification using just the term "axis L2" as a hook. Each independent claim at issue, and several of the dependent claims

[11] Canon overcame the Ohashi rejections by amending the claims to recite features that are not in dispute here.

at issue, recites a coupling member having an "axis L2." '826 patent, claims 1, 5, and 6; '021 patent, claims 1, 2, 6, 8, and 18; '729 patent, claims 1, 9, 18, 27, and 31; '764 patent, claim 7, 20, and 22; '765 patent, claims 1, 4, 13, and 18; '960 patent, claims 1, 4, and 8; '846 patent, claims 1, 3, and 4. Examples of coupling members, each having an axis L2, are shown below in FIGS. 8(c), 8(f), 95(c), and 95(f) of the Asserted Patents.

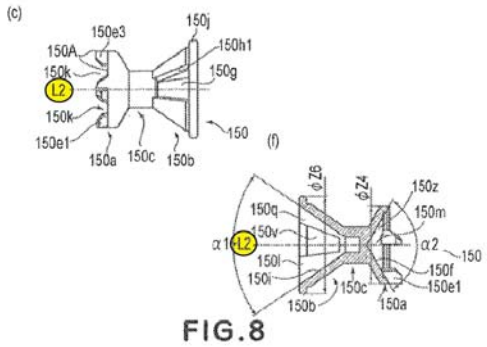


FIG.8

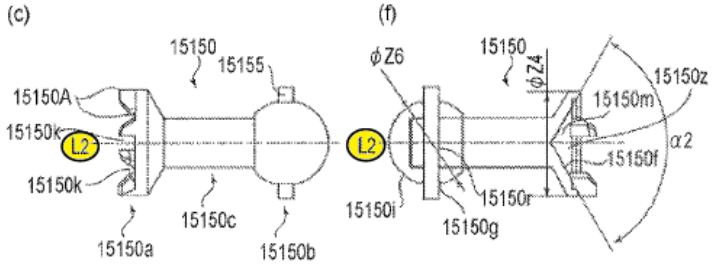


FIG.95

The word "axis" is readily understandable and need not be defined in other words. *See Certain Toner Cartridges and Components Thereof*, 337-TA-918, Order No. 34 (Public Version) at 77 (June 2, 2015) (unreviewed in relevant part) (determining, in an investigation that involved patents from the same family and having the same specification as the Asserted Patents here, that the term "axis" "has a readily understandable, plain and ordinary meaning to one of ordinary skill in the art, and does not require a definition"). Indeed, by using "axis" in their proposed constructions, Respondents and Staff concede that the word does not require definition. *See Certain Activity Tracking Devices, Systems, and Components Thereof*, 337-TA-963, Order No. 31 at 13 (Feb. 17, 2016) ("By incorporating the term 'band' in their proposed construction, Complainants tacitly acknowledge that the plain and ordinary meaning of 'band' does not require a construction."). Meanwhile, "L2" is the claims' shorthand way of differentiating the axis of the coupling member (L2) from the axis of the photosensitive drum (L1). All parties agree that

the L2 designator is a reference to the axis of the coupling member, and the addition of "L2" after "axis" does not change the plain and ordinary meaning of "axis."

Here again, there is no basis for deviating from the term's plain and ordinary meaning. Respondents and Staff cannot show that Canon acted as its own lexicographer and defined "axis L2" to have something other than its plain and ordinary meaning. Nor can they show that Canon disavowed the full scope of the claim term either in the specification or during prosecution. Absent lexicography or disavowal, the plain and ordinary meaning controls. *See Thorner*, 669 F.3d at 1365; *Unwired Planet*, 829 F.3d at 1358.

Should the ALJ determine that a construction of "axis L2" is necessary, Canon proposes "an imaginary line about which the coupling member is rotatable," which is consistent with the term's plain and ordinary meaning. *See, e.g.*, Ex. 11, *The Merriam-Webster Dictionary* at 34 (11th ed. 2005) (defining "axis" to mean, *inter alia*, "a straight line around which a body rotates").

C. Term 3: "connected"

Canon's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
This term has its plain and ordinary meaning and no construction is necessary. The plain and ordinary meaning does not require the coupling member to be connected to the photosensitive drum in a manner that allows the coupling member to incline relative to the drum.	connected [to the drum] in a manner that enables the claimed movement between co-axial and inclined positions	Plain and ordinary meaning, which here is "connected in a manner that enables the claimed movement between co-axial and inclined positions."
Claims: **'826**: 1, 6; **'021**: 1, 8, 18; **'729**: 1, 9, 18, 27; **'764**: 7; **'765**: 1, 4, 13		

Respondents and Staff take yet another bite at the apple with term 3. Here, Respondents and Staff ask the ALJ to graft an inclinable requirement onto the single word "connected." The

term "connected" is used throughout many of the independent claims at issue in a few different contexts. Independent claims 1 and 6 of the '826 patent recite that the coupling member has a first end portion that is "connected" to the photosensitive drum. Independent claim 9 of the '729 patent and independent claim 7 of the '764 patent recite that the first end portion of the coupling member is operatively "connected" to the photosensitive drum. And independent claims 1, 8, and 18 of the '021 patent, independent claims 1, 18, and 27 of the '729 patent, and independent claims 1, 4, and 13 of the '765 patent recite that the first end portion is operatively "connected" to both the photosensitive drum and the developing roller.

Here, as with the previous term "axis," Respondents and Staff concede that "connected" has a plain and ordinary meaning because they repeat that term at the beginning of their proposed constructions. *See Tracking Devices*, Order No. 31 at 13 ("By incorporating the term 'band' in their proposed construction, Complainants tacitly acknowledge that the plain and ordinary meaning of 'band' does not require a construction."). They then pile on language that limits the claims to only a specific type of connection, specifically, one that enables the coupling member to move between coaxial and inclined positions.[12] This is improper, as "[g]eneral descriptive terms will ordinarily be given their full meaning; modifiers will not be added to broad terms standing alone." *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999). In *Johnson*, the Federal Circuit refused to limit the broad term "coupled" to a mechanical or physical coupling, as the defendants had urged. *Id.* at 992. Numerous other Federal Circuit decisions come out the same way. *See, e.g., InterDigital Commc'ns, LLC v. Int'l Trade Comm'n*, 690 F.3d 1318, 1324-27 (Fed. Cir. 2012) (unmodified term "code" not limited to

[12] Although Staff characterizes its construction as plain and ordinary meaning, it is not in fact a plain and ordinary meaning construction because Staff goes on to limit the term "connected" to one specific type of connection.

spreading codes); *Va. Panel*, 133 F.3d at 865-66 (unmodified term "reciprocating" not limited to linear reciprocation); *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 988 (Fed. Cir. 1988) (unmodified term "plasticizer" not limited to external plasticizers).

Here, Respondents and Staff cannot show that Canon acted as its own lexicographer and defined "connected" to mean only connections that allow inclination. To the contrary, while some of the connections described in the specification allow inclination, the specification also uses a form of the word "connect" to describe other types of connections, including fixed connections that do not allow any movement whatsoever. *See, e.g.*, '765 patent at 14:64-67 (describing the FIG. 8 embodiment as including a connecting portion 150c for "connecting" the driven portion 150a and the driving portion 150b with each other), 15:1-4 (describing how the driven portion 150a, the driving portion 150b, and the connecting portion 150c of coupling 150 may be separate parts "connected" with each other), 39:33-39 (describing how the connecting portion 14150c in the FIG. 36 embodiment "connects" the driven portion 14150a and the driving portion 14150b with each other), 58:66-59:4 (describing how the connecting portion 12150c in the FIG. 82 embodiment "connects" the driven portion 12150a and the driving portion 12150b with each other), and 67:62-64 (describing how the connecting portion 15150c in the FIG. 95 embodiment "connects" the driven portion 15150a and the driving portion 15150b with each other). Such "[v]aried use of a disputed term in the written description demonstrates the breadth of the term rather than providing a limited definition." *Johnson*, 175 F.3d at 991. Similarly, Respondents and Staff cannot show that Canon disavowed the full scope of the term "connected" either in the specification or during prosecution. Absent lexicography or disavowal, the plain and ordinary meaning controls. *See Thorner*, 669 F.3d at 1365; *Unwired Planet*, 829 F.3d at 1358.

D. Term 4: "[a coupling member having/including] a first end [portion] at least a part of which is positioned within the drum flange"

Canon's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
This term has its plain and ordinary meaning and no construction is necessary. The reference to "axis L2" in Respondents' and Staff's proposed constructions is not appropriate.	[a coupling member having/including] a first end [portion] where at least a part of the first end portion of the coupling member, which has an axis L2 (as defined above), is positioned within the drum flange	plain and ordinary meaning (*e.g.* [a coupling member having/including] a first end [portion] where at least a part of the first end portion of the coupling member, which has an axis L2 (as defined above), is positioned within the drum flange)
Claims: **'021**: 1; **'729**: 27; **'764**: 20; **'960**: 1; **'846**: 1		

Independent claim 1 of the '021 patent, independent claim 27 of the '729 patent, independent claim 20 of the '764 patent, independent claim 1 of the '960 patent, and independent claim 1 of the '846 patent each recite that the coupling member has either a first end or a first end portion "at least a part of which is positioned within the drum flange."

The term "at least a part of which is positioned within the drum flange" has a readily understandable plain and ordinary meaning and does not require construction. Respondents and Staff concede as much by repeating the operative words of this term in their proposed constructions. *See Tracking Devices*, Order No. 31 at 13 ("By incorporating the term 'band' in their proposed construction, Complainants tacitly acknowledge that the plain and ordinary meaning of 'band' does not require a construction.").

In addition to slightly rearranging the words of the claim term, Respondents and Staff include in their proposed constructions the uncalled for and ambiguous phrase "which has an axis L2 (as defined above)." The phrase is not called for because term 4 makes no mention of an axis L2. The phrase is ambiguous because it is not clear whether the word "which" refers to the first end portion or the coupling member. If the latter, the phrase "which has an axis L2 (as

defined above)" adds nothing because all of the claims that contain term 4 already expressly recite elsewhere that the coupling member has an axis L2. If "which" refers to the first end portion, then Respondents' and Staff's proposed constructions would impose a new limitation—namely, that the first end portion has an axis L2—that is not found in term 4 or anywhere else in the claims.

Finally, Canon is not aware of any issue in this investigation where adopting one of Respondents' or Staff's proposed constructions instead of term 4's plain and ordinary meaning would make a difference, nor have Respondents or Staff identified any such issue. *See U.S. Surgical*, 103 F.3d at 1568 ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *Certain Semiconductor Devices, Semiconductor Device Packages, and Products Containing Same*, 337-TA-1010, Order No. 63 (Public Version) at 28 (Feb. 6, 2017) (declining to construe a term where no party identified a dispute that the construction would resolve).

Because Respondents' and Staff's proposed constructions accomplish nothing other than to add unnecessary verbiage and ambiguity to straightforward claim language, the ALJ should reject their proposed constructions and find that term 4 has its plain and ordinary meaning. *See id.* at 51-52 (rejecting constructions that would introduce "ambiguity into otherwise clear claim terms" and adopting plain and ordinary meaning instead).

E. Term 5: "at least one projection that is open to the axis L2"

Canon's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
This term has its plain and ordinary meaning and no construction is necessary. The plain and ordinary meaning does not require that an inner surface of the projection be a uniform distance from L2 and extend parallel to L2. Alternatively: no portion of the coupling member lies between the at least one projection and the axis L2	at least one projection that has an inner surface that is a uniform distance from L2 and extends parallel to L2	At least one projection that has an inner surface that is a uniform distance from L2 and extends parallel to L2
Claims: **'826**: 1, 6; **'729**: 1, 9, 18; **'764**: 7; **'765**: 13		

The last disputed claim term appears in independent claims 1 and 6 of the '826 patent, independent claims 1, 9, and 18 of the '729 patent, independent claim 7 of the '764 patent, and independent claim 13 of the '765 patent. These claims describe the coupling member as having a second end portion that includes "at least one projection that is open to the axis L2." For example, FIGS. 29 and 30 of the Asserted Patents, reproduced below, show multiple projections 1550d1, 1550d2, 1550d3, and 1550d4, each open to the axis L2. Because the projections are open the axis L2, the free end 180b of the printer drive shaft 180 is able to fit inside the projections and the pin 182 on the drive shaft is able to abut and rotate the projections.

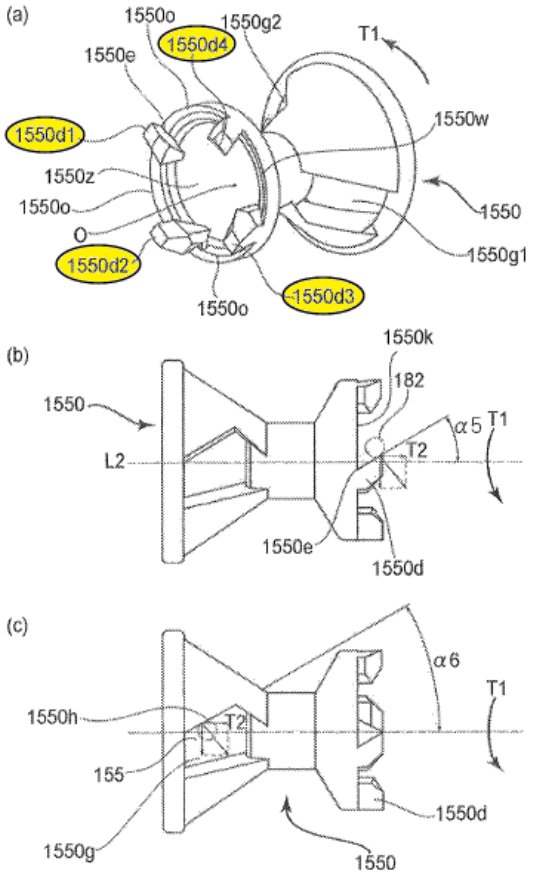


FIG.29

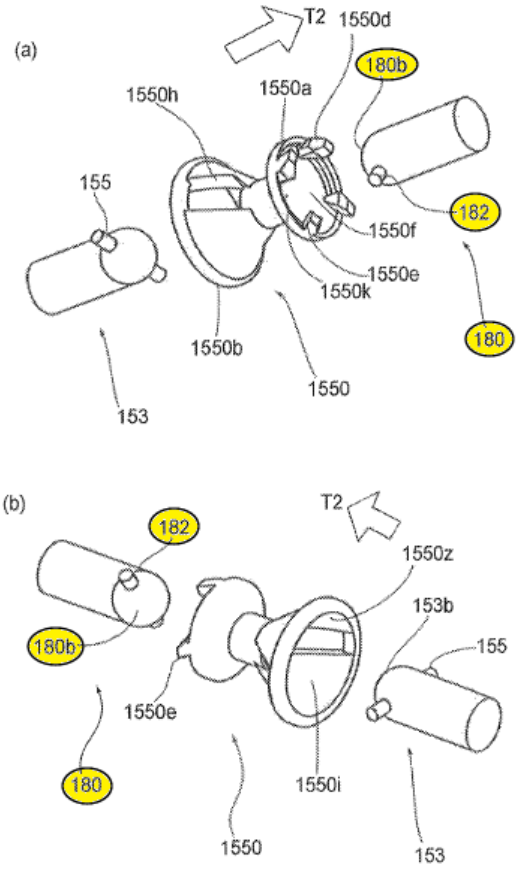


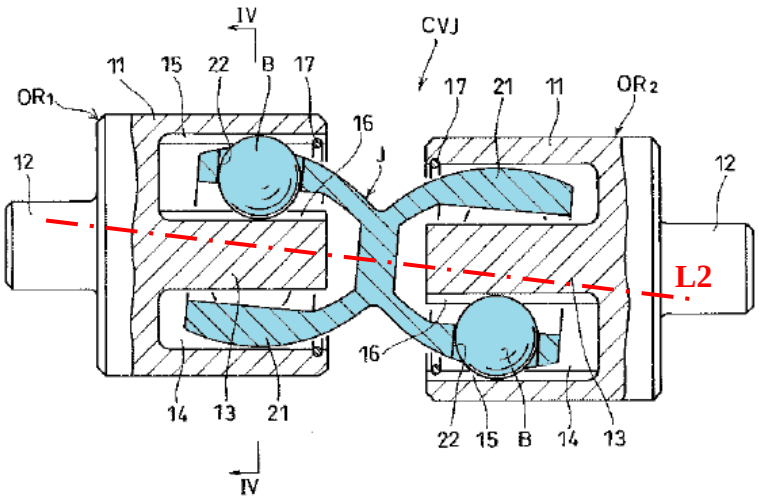
FIG.30

The term "at least one projection that is open to the axis L2" has a readily understandable plain and ordinary meaning and does not require construction. Alternatively, Canon proposes construing this term to mean that "no portion of the coupling member lies between the at least one projection and the axis L2."

Respondents and Staff agree that the words "at least one projection" have their plain and ordinary meaning, as they repeat these words verbatim in their proposed construction. The dispute here concerns the words "open to the axis L2," which Respondents and Staff interpret to mean that the projection "has an inner surface that is a uniform distance from L2 and extends parallel to L2." This construction is unduly limiting and, if adopted, could lead to absurd results.

Respondents' and Staff's proposed construction is unduly limiting because it requires the projection to have an inner surface that is a uniform distance from L2 and extends parallel to L2. There is nothing in the claims, specification, or prosecution history that requires the projection to have an inner surface that is a uniform distance from L2 and extends parallel to L2. In fact, nowhere do the Asserted Patents even so much as comment on whether the disclosed projections have inner surfaces that are a uniform distance from L2 and extend parallel to L2.

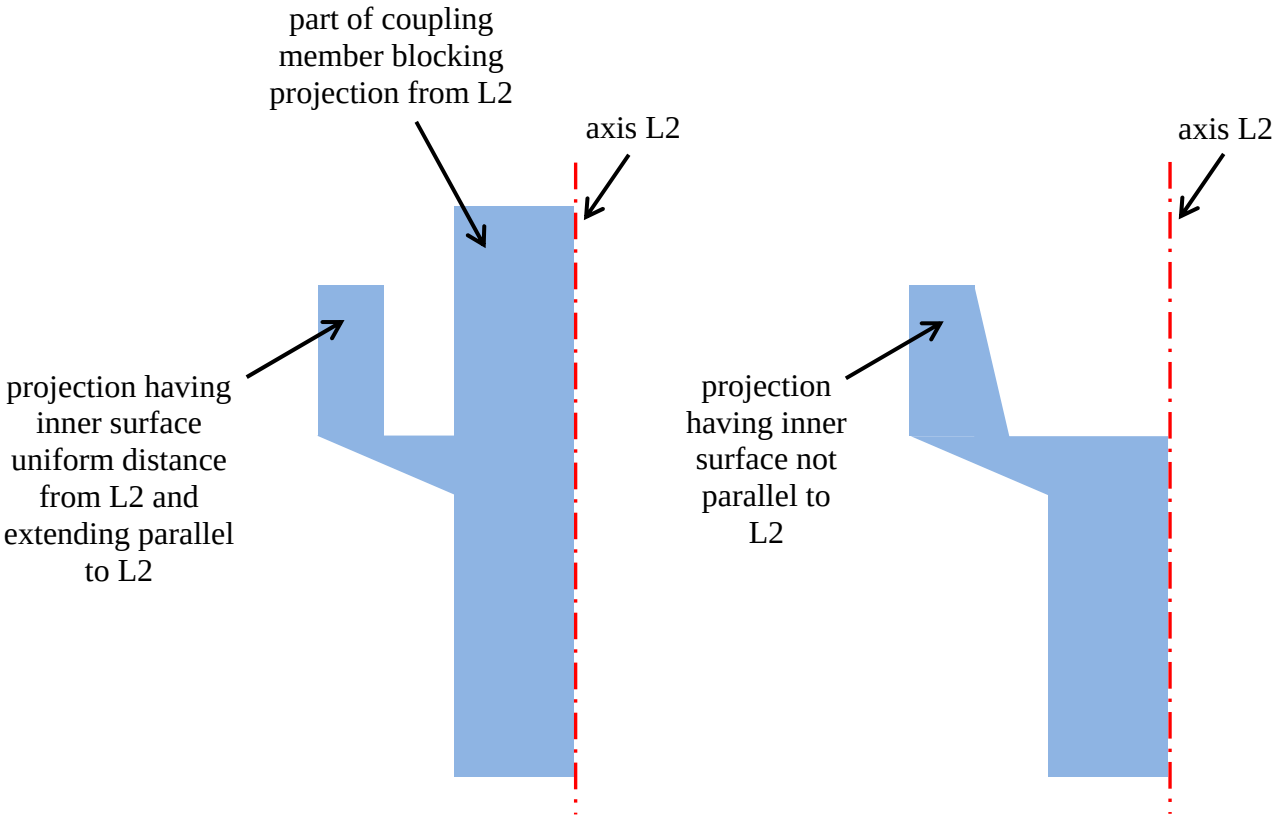
Nor is there any disavowal in the Asserted Patents or their prosecution histories of projections lacking inner surfaces that are a uniform distance from L2 and extend parallel to L2. To the contrary, the prosecution history of the '729 patent demonstrates that projections with inner surfaces that are not a uniform distance from L2 and do not extend parallel to L2 fall within the scope of term 5. During prosecution, the PTO examiner initially rejected several claims containing term 5 based on the same Ohashi reference discussed above in Section VI.A. With respect to term 5, the examiner asserted that arm 21 and ball B of Ohashi's joint J constitute at least one projection that is open to the axis of joint J (annotated L2 in the figure below). Ex. 9 at CAN0008855 (rejecting application claim 184, which eventually issued as claim 1 of the '729 patent) and CAN0008856 (rejecting application claim 198, which eventually issued as claim 18 of the '729 patent).



The inner surface of Ohashi's ball B is not a uniform distance from L2 and does not extend parallel to L2. Yet, the examiner understood that ball B, together with arm 21, meet the limitation "at least one projection that is open to the axis L2," and Canon never disputed this aspect of the examiner's rejection. Such intrinsic evidence shows that Respondents' and Staff's proposed construction is unduly limiting. *See Phillips*, 415 F.3d at 1317 ("[T]he prosecution history provides evidence of how the PTO and the inventor understood the patent."); *Am. Hoist*, 725 F.2d at 1359 ("[E]xaminers … are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art ….").

Moreover, adopting Respondents' and Staff's proposed construction could lead to absurd results. Take, for example, the two hypothetical coupling members shown below. (The coupling members are symmetrical with respect to axis L2, but only the left half of each is shown.) In the example on the left, the coupling member has a projection that is a uniform distance from axis L2 and extends parallel to axis L2, but the projection is blocked from axis L2 by another part of the coupling member. Under Respondents' and Staff's proposed construction, this projection would be considered "open to the axis L2." In the example on the right, there is nothing between the projection and axis L2, but the inner surface of the projection is not parallel to axis L2.

Under Respondents' and Staff's proposed construction, this projection would not be considered "open to the axis L2."



Conversely, under either a plain and ordinary meaning construction or Canon's alternative proposed construction, the blocked projection on the left would not be considered "open to the axis L2" while the unblocked projection on the right would be considered "open to the axis L2." This is the far more sensible result.

VII. CONCLUSION

For the foregoing reasons, Canon requests that the ALJ determine that the disputed claim terms have their plain and ordinary meaning and do not require construction, or, alternatively, that the ALJ adopt Canon's alternative proposed constructions where Canon has proposed one.

Dated: July 26, 2018

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on July 26, 2018, copies of Canon's Initial *Markman* Brief were filed and served as indicated below.

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