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**	Inv. No. 337-TA-1106

RESPONDENTS' INITIAL *MARKMAN* BRIEF

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I. INTRODUCTION

To understand the nature of this dispute and the importance of the claim construction issues to be decided in this investigation, it may be useful to understand the background of the technology at issue and the litigation history of these patents and parties. Respondents therefore provide a brief description of this background here.

A. This Investigation Relates to Printer Cartridges Used in Laser Printers.

The seven patents[1] currently asserted by Complainant Canon in this investigation involve removable cartridges for electrophotographic (sometimes called "laser") printers. Canon manufactures these printers and the cartridges compatible with them. Respondents manufacture or repair cartridges compatible with Canon's printers. This investigation is Canon's latest attempt to eliminate the secondary market for cartridges compatible with its printers.

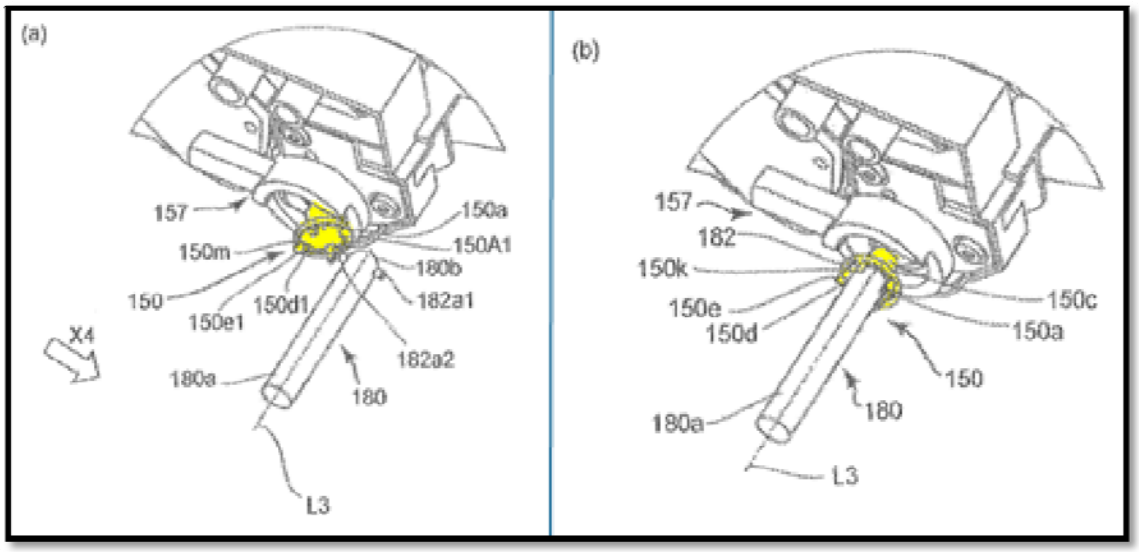
For decades, printers employing the electrophotographic process have used removable cartridges to facilitate the ease of replaceable components. These cartridges nearly always include components such as a photosensitive drum, a developer roller, a toner supply reservoir, and a casing to hold these pieces together. These cartridges also require a mechanical coupling to attach rotatable components (such as the photosensitive drum) to a drive shaft located on the printer itself. It is primarily these couplings that are the subject of the Asserted Patents.

B. Canon Patented the Use of a Pivotable Coupling in a Printer Cartridge.

12 years ago, three employees at Canon came up with an idea of adding a pivotable coupling to a printer cartridge. Figures 21(a) and (b) of the '765 patent illustrate this point.

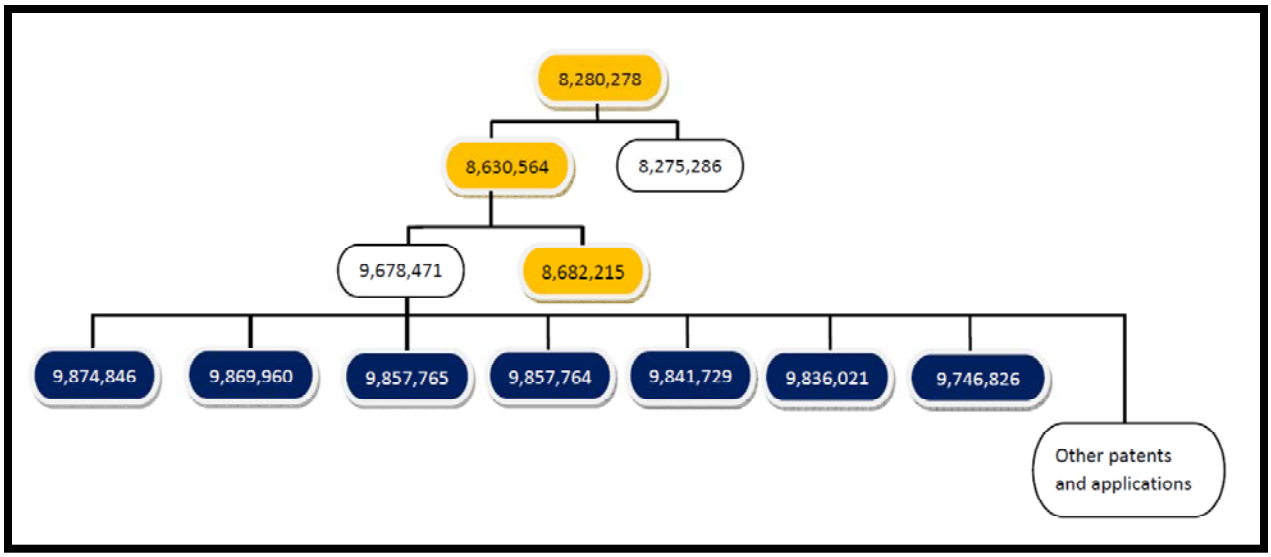
[1] The patents currently asserted in this investigation are U.S. Patent Nos. 9,746,826 (the "'826 patent"); 9,836,021 (the "'021 patent"); 9,841,729 (the "'729 patent"); 9,857,764 (the "'764 patent"); 9,857,765 (the "'765 patent"); 9,869,960 (the "'960 patent"); and 9,874,846 (the "'846 patent"). Respondents refer to these seven patents collectively as the "Asserted Patents" throughout this brief. Each of these patents has a nearly identical specification: each includes the same figures, the same 19 embodiments, and the same written description.

These figures, like the others in the Asserted Patents, show the core concept of Canon's supposed invention: allowing a coupling to pivot between a first position (in which the coupling is engaged with the printer motor shaft (Figure 21(b)) and a second position (in which the coupling is disengaged from the drive shaft (Figure 21(a)). In the figures below, coupling 150 on cartridge 157 engages with drive shaft 180 on a printer motor.



'765 PATENT AT FIGS. 21(A), 21(B)
(SHOWING THE CLAIMED "COUPLING MEMBER" HIGHLIGHTED)

That single concept, originally filed in an application that would issue as U.S. Patent No. 8,280,278 (the "'278 patent"), led to dozens of other patent applications—seven of which Canon has asserted in this investigation. The following graphic illustrates this family of pivotable coupling patents:



GRAPHIC SHOWING CANON'S U.S. PATENTS IN THE '278 FAMILY (ORANGE PATENTS ASSERTED PREVIOUSLY; DARK BLUE PATENTS ASSERTED HERE)

All 19 embodiments of the shared specification for these patents, along with all 112 figures associated therewith, are based on the same concept: a coupling that is capable of pivoting relative to the axis of the photosensitive drum.

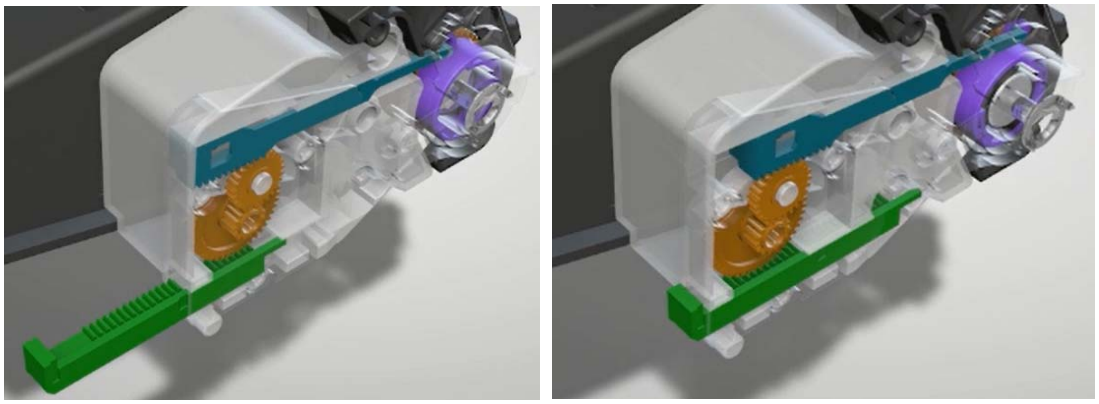
C. Canon Asserted the Same Family of Patents in a Prior ITC Investigation (the -918 Investigation).

Four years ago, Canon launched an earlier effort to stifle the secondary market for printer cartridges that could be used in Canon printers: Investigation No. 337-TA-918. In the -918 Investigation, Canon asserted several patents (three of which are in the same patent family asserted in the present investigation) against many of the same Respondents here.

Among the patents asserted in the -918 Investigation was the '278 patent, which is the ultimate parent of the pivotable coupling family of patents. The '278 patent has the same specification and figures as the Asserted Patents here, and all of the Asserted Patents here claim priority to the '278 patent.

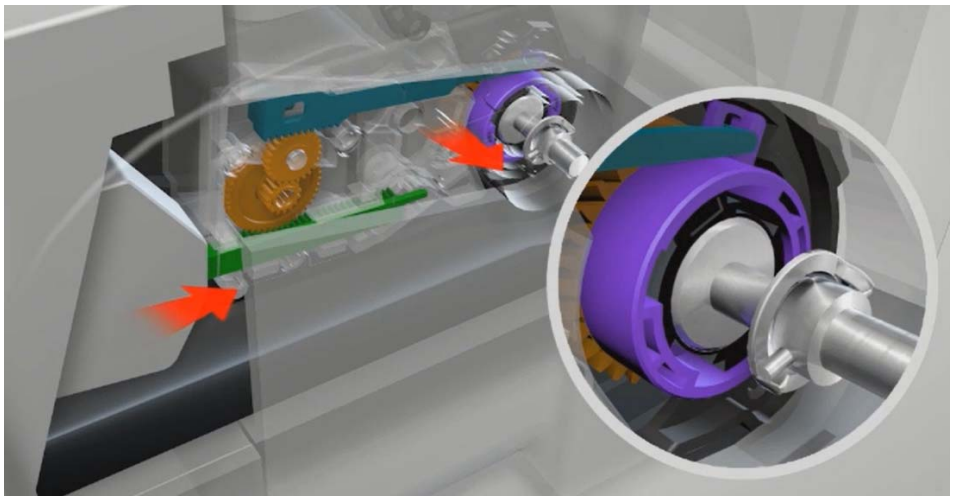
During the course of the -918 Investigation, several respondents (including the Ninestar Respondents), in order to resolve their dispute with Canon, settled the case and reconfigured

their printer cartridges to remove the pivotable coupling. In these new designs, the coupling moves axially (in and out relative to the cartridge body) without pivoting or inclining, similar to a turtle sticking its head in and out of its shell. The following images illustrate one such redesign.



IMAGES OF NINESTAR "LEVER DESIGN" REDESIGNED CARTRIDGE

In this design, the coupling (the silver "cup-like" component on the right of the images) moves outward toward the printer drive shaft (not shown) when the printer door pushes the green lever inward. The following image illustrates this concept of the printer door activating the lever, which pushes the coupling toward the printer drive shaft. The coupling in these designs is incapable of pivoting.



ADDITIONAL IMAGE OF NINESTAR "LEVER DESIGN"

Canon admitted that these redesigned cartridges did not infringe, and the parties agreed that the new designs were outside the scope of the remedial orders that issued in the -918 Investigation. Joint Stipulation Regarding Representative Accused Products, Inv. No. 337-TA-918, at 4 (Oct. 8, 2014) (Ex. A). Other respondents implemented their own designs, which also moved axially in and out and did not pivot.

D. Canon Attempts to Use Its New Patents to Ensnare the Respondents' Axially Moving Couplings.

Following the -918 Investigation's resolution, and after the parties had settled, Canon filed a slew of new claims in a series of continuation applications—all of which claim priority to the original '278 patent, and all of which were filed from December 2016 to March 2017, after Canon learned of Respondents' redesigns. These 2016 and 2017 applications matured into the patents asserted here, which issued between August 2017 and January 2018.

Canon failed to eliminate the secondary market for cartridges compatible with its printers in the -918 Investigation. Now, twelve years after its inventors came up with their idea, Canon seeks to impermissibly broaden these claims far beyond the inventors' original concept for a pivotable coupling. Here, Canon has interpreted these new claims to cover not just the pivoting movement that is at the core of every figure and embodiment of the Asserted Patents, but also axial movement of the coupling and combinations of the two. *See* Compl. at ¶ 102 ("[T]he coupling member can move (for example, in an axial direction and/or by pivoting) as it engages with and disengages from a drive shaft in the printer.").

E. The Asserted Claims Should Be Held to Their Proper Scope.

Canon should be held to what its employees actually invented: a printer cartridge with a pivotable coupling. Not a single disclosure in the Asserted Patents shows a coupling that is incapable of pivotal movement, and not a single embodiment covers the type of movement –

axial only – that Respondents' accused products use. Because nothing in the Asserted Patents' specification shows a coupling that is capable of some other type of movement without pivoting, the claims must be construed to require the capability of pivoting, regardless of whether they can cover pivotal movement in combination with some other type of movement.

Respondents and the Commission Investigative Staff have proposed constructions for several claim terms[2] that appropriately foreclose Canon from construing its claims far beyond what the specification supports. Canon should be held to what its employees actually invented. It should not be permitted to expand its claims to ensnare what Respondents designed nearly a decade after Canon wrote this specification.

II. LEVEL OF ORDINARY SKILL IN THE ART

Respondents submit that the level of ordinary skill in the art for the Asserted Patents is as follows: 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.

Canon has proposed that the level of ordinary skill in the art is as follows: 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

[2] Terms 1-3 directly go to this issue.

design work related to toner cartridges for laser printers, or would have had persons with such experience available to work with him.

However, Respondents, Canon, and the Staff all agree that the claim construction issues to be decided here do not depend on which definition is adopted. The parties also agree that addressing the differences between the parties' proposed levels of skill is not necessary at this time.

III. CONSTRUCTION OF THE CLAIM TERMS

The asserted claims include common terms across the Asserted Patents, and many of these terms have common or related arguments. Thus, Respondents have grouped the terms by common issue rather than by patent.

A. The Disputed Terms

Canon's claims cannot be broadened to cover couplings that are incapable of pivotable movement.[3] Put differently, there is no support in the intrinsic evidence for a coupling member that moves without pivoting. Canon's claims must be construed accordingly.

While courts sometimes avoid importing limitations from the specification into the claims, there is nevertheless a "distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*). For example, when a claim term is described throughout the specification "in a manner consistent with only a single meaning," the patentee "has defined that term by implication." *Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1377 (Fed. Cir. 2017) (quoting *Bell Atl. Network Servs. v. Covad*

[3] This is a case-dispositive issue. There can be no dispute that Respondents' accused products have couplings that move only axially without pivoting.

Comm'ns Grp., Inc., 262 F.3d 1258, 1271 (Fed. Cir. 2001)). After all, the specification "is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315.

Indeed, the Federal Circuit has repeatedly held that claim construction must account for the limits of the specification, even if those limits come from language describing embodiments. *Alloc, Inc. v. ITC*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) ("this court looks to whether… the specification read as a whole suggests that the very character of the invention requires the limitation be a part of every embodiment"); *Bell Atl.*, 262 F.3d at 1269 ("the patentee may act as his own lexicographer by using the specification to define terms either expressly or 'by implication'") (citation omitted); *see also Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1399-1400 (Fed. Cir. 2008) ("the common specification, including the Abstract, consistently describes the invention in terms of a third party providing internet access to customers…. Accordingly… the claims read in light of the entire specification indicate that 'providing a communications link through equipment of the third party' requires providing customers with internet access.") (citation omitted).

Administrative law judges at the Commission have embraced this principle and have held that a description "in the context of a preferred embodiment" should limit broad claim terms where that description "clearly applies to the claimed invention as a whole and not just the preferred embodiment." *Certain Non-Volatile Memory Devices and Prods. Containing Same*, Inv. No. 337-TA-1046, Order No. 23 at 30-31 (Dec. 5, 2017); *see also Certain Wireless Devices Including Mobile Phones & Tablets II*, Inv. No. 337-TA-905, Order No. 14 at 63 (June 2, 2014) ("the correct construction of the term data is 'information other than voice.' The Asserted Patents use the term 'data' in a manner consistent with only one meaning, which is that the word 'data' excludes voice."); *Certain Wiper Blades*, Inv. No. 337-TA-816, Order No. 45 at 49 (Aug. 31,

2012) (a claim term consistently described in a single context forecloses construing the term with a broader meaning unless that embodiment "clearly demonstrate[s]" an alternative).

Thus, courts can (and should) use the specification to rein in overly broad claim language that covers far more than what the patent discloses. *See, e.g.*, *Kinetic Concepts, Inc. v. Blue Sky Med. Grp., Inc.*, 554 F.3d 1010, 1019 (Fed. Cir. 2009) (construing "wound" to require a "skin wound"). "[T]he written description can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format." *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001).

For example, the Federal Circuit has rejected a claim construction of "without play" when the specification and all figures showed "with play." *Alloc*, 342 F.3d at 1370. As the Federal Circuit has explained, "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." *Id.* (citing *SciMed*, 242 F.3d at 1345).

In sum, a feature common across all disclosed embodiments within a patent's specification properly limits the scope of the claims. *See Homeland Housewares*, 865 F.3d at 1377 (when a claim term is described throughout the specification "in a manner consistent with only a single meaning," the patentee "has defined that term by implication"); *Bell Atl.*, 262 F.3d at 1269 ("the patentee may act as his own lexicographer by using the specification to define terms either expressly or 'by implication'").

Such is the case here. As shown in the following sections, the "very character of the invention" described in the Asserted Patents is a coupling that is capable of pivoting. The figures of the Asserted Patents, and every embodiment of the Asserted Patents, speak with a single voice

and invariably show a coupling capable of pivotable movement. The specification does not describe couplings that move only axially without pivoting or inclining, and Canon's claims should be construed accordingly.[4]

[4] In fact, if Canon's claims are construed to broadly cover non-pivotable movement (such as axial movement), the claims would be invalid under pre-AIA 35 U.S.C. § 112, ¶ 1, as lacking proper written description support and as failing to enable a person of ordinary skill in the art how to use the claimed invention with a non-pivotable coupling. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 481 F.3d 1371, 1380 (Fed. Cir. 2007) ("The irony of this situation is that Liebel successfully pressed to have its claims include a jacketless system, but, having won that battle, it then had to show that such a claim was fully enabled, a challenge it could not meet. The motto, 'beware of what one asks for,' might be applicable here.").

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 ('826 patent, claims 1, 6; '021 patent, claims 1, 8, 18; '729 patent, claims 1, 9, 18, 27; '764 patent, claims 7, 20; '765 patent, claims 1, 4, 13; '960 patent, claim 1; '846 patent, claim 1)

Respondents' Proposed Construction	**Staff's Proposed Construction**	**Canon's Proposed Construction**
"wherein the coupling member is pivotable relative to the photosensitive drum between (i) a substantially co-axially 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 the direction of the axis 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 (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)	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."

The intrinsic evidence mandates that the limitations requiring a coupling member that is "movable" between first and second positions be interpreted to require the capability of pivoting between a substantially coaxial, engaged position and an inclined, pre-engaged position. Regardless of whether that coupling may be capable of some other type of movement, it must be capable of pivoting, as all embodiments in the Asserted Patents show. There is no dispute that these limitations read on a pivotable coupling. The sole dispute is whether these limitations

require that capability and, more particularly, whether the claims can read on a coupling that is incapable of pivotable movement, such as one that moves only axially.

Because the specification exclusively describes a pivotable coupling in all figures and embodiments, and because it clearly applies to the claimed invention as a whole, the limitations of Term 1 should be construed to require a coupling member that has the capability of pivoting relative to other portions of the cartridge. *See Homeland Housewares*, 865 F.3d 1372 at 1377; *Certain Non-Volatile Memory Devices*, Inv. No. 337-TA-1046, Order No. 23 at 30-31. Respondents and the Staff's constructions embrace this fact; Canon's ignores it.

When describing the claimed "coupling member," the patents consistently speak with one voice, describing only couplings that are capable of pivoting. The words *incline*, *inclined*, *inclining*, and *inclinable* appear about 250 times in each patent's specification. Similarly, the words *pivot*, *pivoted*, *pivoting*, and *pivotable* appear about 93 times. Pivoting is at the very core of Canon's supposed invention.

In fact, the inventors even expressly described their purported "invention" as a pivotable coupling "that can take different angular positions":

> [I]n the present invention, the axis of the drum coupling member can take the different angular positions relative to the axis of the photosensitive drum. The drum coupling member can be engaged with the drive shaft in the direction substantially perpendicular to the axis of the drive shaft provided in the main assembly by this structure. In addition, the drum coupling member can be disengaged from the drive shaft in the direction substantially perpendicular to the axis of the drive shaft.

'765 patent[5] at 83:7-16 (emphasis added); *see also* '765 patent at 19:23-25 ("[T]he coupling 150 is pivotable in all directions substantially relative to the axis L1.").

[5] Each of the Asserted Patents share the same specification. While the cites are limited to certain patents throughout this brief, identical disclosures appear in each of the remaining Asserted

When asked during discovery for support for its overbroad reading of the claims to include a coupling that moves only axially (and does not pivot), Canon pointed only to one specific portion of the Asserted Patent's specification, "Embodiment 13":

> **Interrogatory No. 27**
>
> For each Asserted Patent, please identify the intrinsic evidence (including the written description, figures, or prosecution history) that you contend discloses or otherwise describes a process cartridge having a coupling member and a photosensitive drum wherein the entire coupling member moves toward or away from the photosensitive drum along the coupling member's longitudinal axis.
>
> **Response to Interrogatory No. 27**
>
> In addition to the foregoing general objections, Canon objects to this interrogatory as seeking information that is neither relevant to any claim or defense nor reasonably calculated to lead to the discovery of admissible evidence because none of the Asserted Claims requires an entire coupling member to move toward or away from the photosensitive drum along the coupling member's longitudinal axis. Canon also objects to this interrogatory as premature to the extent it seeks expert opinions and analyses, exhibits, witness testimony, legal bases, and/or arguments that Canon may rely upon at the hearing in this investigation before the applicable deadlines in the forthcoming procedural schedule.
>
> Subject to and without waiver of the foregoing general and specific objections, Canon responds as follows: See at least the text and figures corresponding to "Embodiment 13" of each Asserted Patent.

Canon's Resp. to Ninestar Interrogatories Nos. 1-79 at 113-14[6] (served April 25, 2018) (attached as Ex. B) (highlighting added). Thus, of the nineteen embodiments called out in the Asserted

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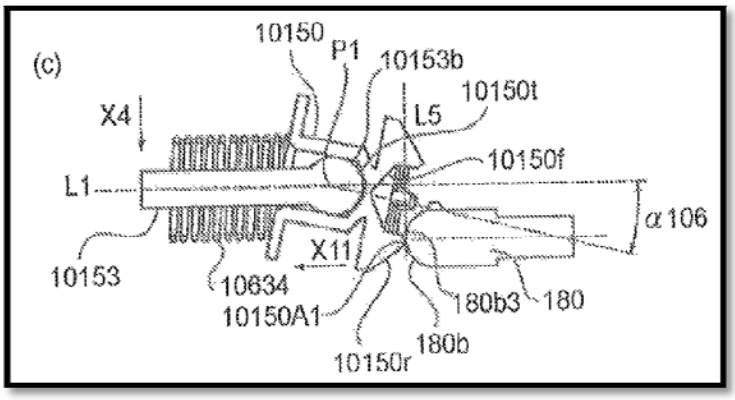
Patents. The parties have agreed, for purposes of simplicity and consistency, to cite to the '765 patent (Ex. F) as an example.

[6] Following Canon's pointing only to Embodiment 13 as supporting its position, the Ninestar Respondents also asked Canon to admit that it was not relying on any statements from the prosecution histories of the Asserted Patents to support its overbroad reading of the Asserted Claims to cover a coupling member that moves axially without pivoting. Canon failed to respond meaningfully and cited nothing from the prosecution histories in its response. *See* Canon Resp. to Ninestar RFA Nos. 1-23 at 15 (served May 29, 2018) (attached as Ex. C).

Patents' shared specification, Canon pointed only to Embodiment 13 as teaching something other than pivotable movement of a coupling.

But even Embodiment 13 discloses a coupling member that pivots. This capability is plainly shown in Figure 88(c), one of the figures cited in Embodiment 13 (alpha 106 is the "angle of inclination"):



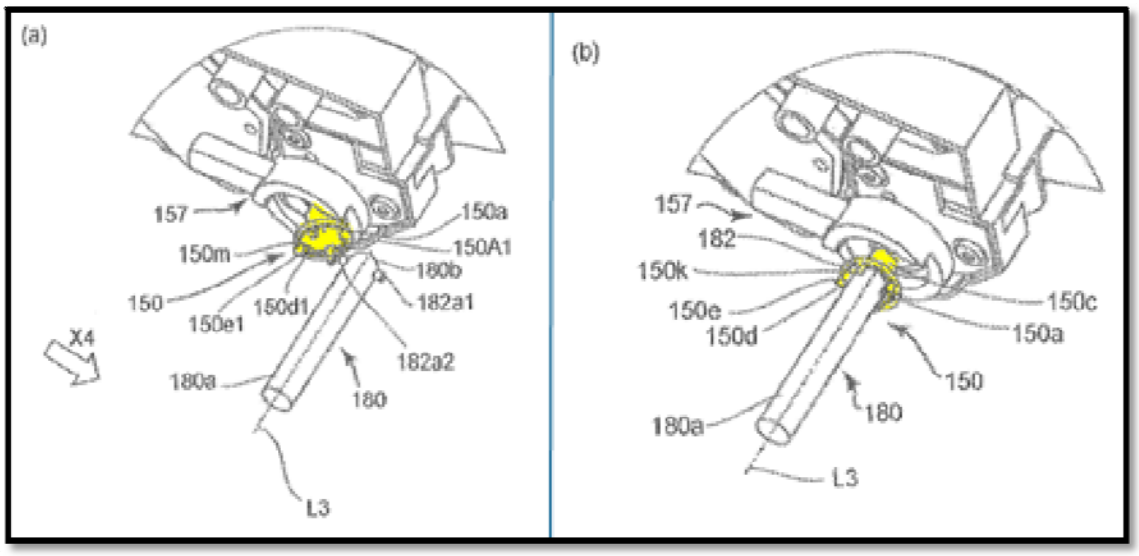
'765 PATENT, FIG. 88(C)

The description of Embodiment 13 also unmistakably requires pivotal movement of the coupling. For example, Embodiment 13's coupling "rotates clockwisely about the center Pl of the free end portion 10153b (pre-engagement angular position)." *Id.* at 63:4-6; *see also id.* at 63:21-23 ("the space required by the pivoting motion of the coupling 10150 is small" (emphasis added)).

The specification also invariably describes the Embodiment 13 coupling as having the capability of pivoting, as evidenced by the patents' repeated description of this coupling as having "combined" movement that includes pivoting. *See, e.g.*, *id.* at 63:14-18, 63:34-38. Thus, even in the sole embodiment Canon claims teaches some other type of coupling motion, the coupling member still must be able to pivot.

Similarly, the patents' shared specification only ever distinguishes between two "positions" that the coupling can take: a position in which the coupling is engaged with the

printer drive shaft, and a position prior to this engagement (for example, during cartridge insertion) or when the coupling is disengaged. For example, Figures 21(a) and 21(b) of the '765 Patent illustrate the pre-engaged and engaged positions, respectively:



'765 PATENT AT FIGS. 21(A), 21(B)
(SHOWING THE CLAIMED "COUPLING MEMBER" HIGHLIGHTED)

Further, Canon's commentary on the plain and ordinary meaning – that the plain meaning "does not require the coupling to pivot or incline" or "to be engaged in the first position" – highlights that there is a claim construction dispute that must be resolved here. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (court has a duty to resolve "actual" claim construction disputes). Canon's gloss on its proposed plain meaning interpretation also underscores how broadly Canon would stretch its claims – any position, according to Canon, can constitute the "first position." This is impermissible.

Canon's patents tell a single, consistent story, and all embodiments require a coupling member that is capable of pivoting. The claims must be construed accordingly. *See Homeland Housewares*, 865 F.3d at 1377; *Alloc*, 342 F.3d at 1370 ("[A]ll the figures and embodiments

disclosed in the asserted patents imply play, or, as in the case of Figure 1b, expressly disclose play. Indeed, the patents do not show or suggest any systems without play.") (emphasis added).

Term 2: "axis L2" ('826 patent, claims 1, 5, 6; '021 patent, claims 1, 2, 6, 8, 18; '729 patent, claims 1, 9, 18, 27, 31; '764 patent, claims 7, 20, 22; '765 patent, claims 1, 4, 13, 18; '960 patent, claims 1, 4, 8; '846 patent, claims 1, 3, 4)

Respondents' Proposed Construction	**Staff's Proposed Construction**	**Canon's Proposed Construction**
"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"	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

The intrinsic evidence supports Respondents and the Staff's construction. The asserted claims plainly distinguish between axis L1 and axis L2: L1 is the axis of a photosensitive drum, while L2 is the axis of the coupling member. *See*, *e.g.*, '765 patent at 83:43 (claim 1 reciting "a coupling member having an axis L2"), 83:43 (claim 1 reciting "a coupling member having an axis L2"). This term should be construed consistently with Term 1 and the asserted claims themselves.

In each of the embodiments, a motion of the coupling member is shown or disclosed by contrasting axis L1 and axis L2. For example, the figures show the coupling member moving between a position where axis L1 and axis L2 are coaxial (that is, axis L1 and axis L2 are on the same line) and a position where axis L2 is inclined relative to axis L1. *See, e.g.*, '765 patent at FIGS. 88-90, 92.

Further, the specification explicitly describes that "in the present invention," the axis of the coupling member must be capable of taking different angular positions relative to the axis of the photosensitive drum:

> [I]n the present invention, the axis of the drum coupling member can take the different angular positions relative to the axis of the photosensitive drum. The drum coupling member can be engaged with the drive shaft in the direction substantially perpendicular to the axis of the drive shaft provided in the main assembly by this structure. In addition, the drum coupling member can be disengaged from the drive shaft in the direction substantially perpendicular to the axis of the drive shaft.

'765 patent at 83:7-16 (emphasis added). Indeed, were there not pivotal movement of the coupling, the coupling member would not need its own axis separate from that of the photosensitive drum—only L1 would be needed, as axial motion is, by definition, along an axis.

Because the Asserted Patents describe the coupling's capability to pivot in the context of the entire "invention," the claim scope should be limited accordingly. *See Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) ("When a patent thus describes the features of the 'present invention' as a whole, this description limits the scope of the invention.").

In other words, the specification makes plain that the inventors intended that the coupling member be capable of taking "different angular positions" with respect to the axis of the photosensitive drum. Thus, a coupling member with axis L2 must be able to angle away from (or incline relative to) the photosensitive drum, which has an axis L1.

Respondents and the Staff's proposed construction also finds support in the rest of the specification. For example, even Embodiment 13, relied on by Canon to purportedly disclose axial-only motion of the coupling member, shows that the coupling member has an axis L2 that must pivot with respect to axis L1:

> With such a structure, the movement in the direction of the axis L2 and the pivoting motion (swinging operation) are combined, and the coupling is swung from the pre-engagement angular position to the rotational force transmitting angular position.
>
> By this structure, even if the angle α 106 (inclination amount of the axis L2) is small, the cartridge can be mounted to the apparatus main assembly A.

'765 patent at 63:14-21 (emphasis added); *see also* '765 patent at FIG. 88 (showing α 106, which is the inclination of the axis L2 with respect to axis L1).

Indeed, as already discussed, the very character of Canon's invention requires pivotable motion of the coupling member. Applying this core concept to this term means that the axis of the coupling (axis L2) must be at an angle, or incline, relative to the axis of the photosensitive drum (axis L1). *See, e.g., Alloc*, 342 F.3d at 1370. Therefore, the intrinsic evidence supports Respondents and the Staff's construction of "axis L2."

As with Term 1, Canon's attempted gloss on the plain and ordinary meaning of "axis L2" ("[t]he plain and ordinary meaning does not require the axis L2 to be inclinable or capable of taking different angular positions relative to axis L1") highlights that there is a claim construction dispute that must be resolved here. That dispute should be resolved in Respondents and the Staff's favor.

Term 3: "connected" ('826 patent, claims 1, 6; '021 patent, claims 1, 7, 8, 18; '729 patent, claims 1, 9, 18, 27; '764 patent, claim 7; '765 patent, claims 1, 3, 4, 13, 19)[7]

Respondents' Proposed Construction	Staff's Proposed Construction	Canon's Proposed Construction
"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"	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.

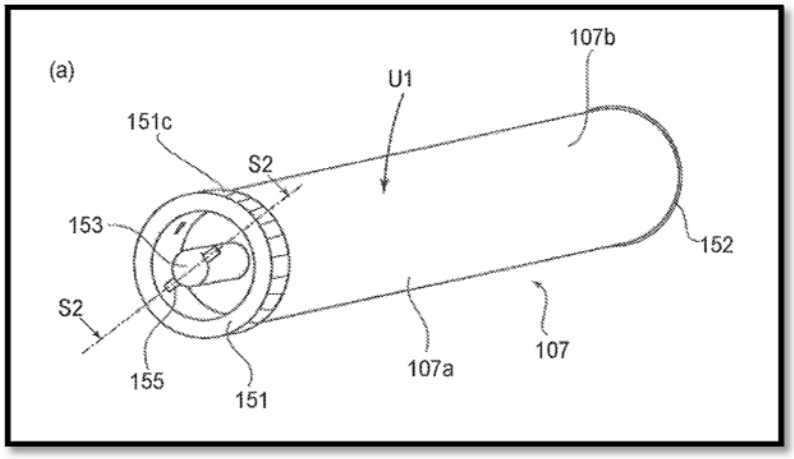
Here, the parties dispute whether the coupling member is required to be connected to the photosensitive drum "in a manner that enables the claimed movement between co-axial and inclined positions." Respondents and the Staff submit that this term should be construed to embrace the most natural reading of the claims as a whole in view of the specification. Canon proposes a plain-meaning construction that has no relationship to what Canon actually invented.

The intrinsic evidence supports Respondents and the Staff's proposed construction. A connection that allows the coupling to incline between the first and second positions is required in order to accomplish the pivoting motion that is at the heart of Canon's alleged invention which, as described, is a coupling member that is pivotable with respect to the photosensitive drum. Canon's claims should be held to that.

The coupling member, as recited in the Asserted Patents, comprises a first end portion. The claims further recite that the first end portion must "connect" to a photosensitive drum—that

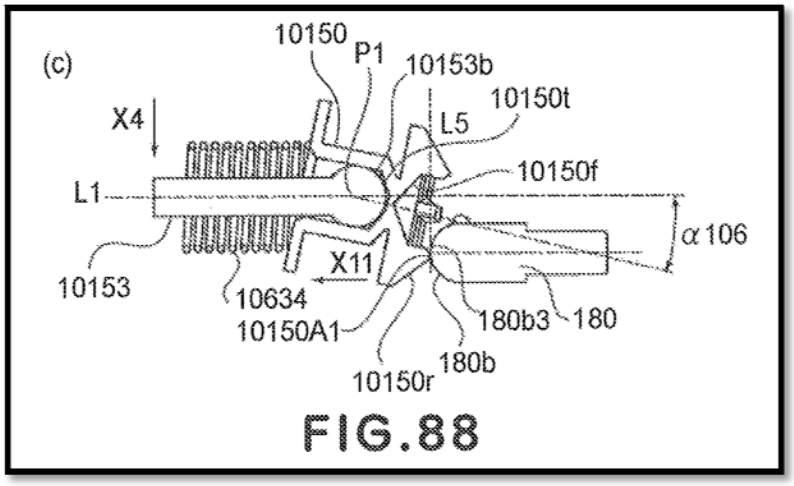
[7] While the parties have agreed to construe "connected" in this investigation in order to streamline the issues, Respondents reserve the right to seek construction of "operatively connected" in another case or investigation.

is, the first end portion must be joined, either directly or indirectly, to a photosensitive drum. According to the patents' shared specification, a photosensitive drum 107 comprises a drum shaft 153 extending from an end part on axis L1. '765 patent, 13:33-43. Figure 6(a) shows certain components of a photosensitive drum 107:



'765 PATENT, FIG. 6(A)

As another example, coupling member 10150 from Embodiment 13 attaches to drum shaft 10153 of the photosensitive drum, as shown in FIG. 88(c):



'765 PATENT, FIG. 88(C)
(SHOWING DRUM SHAFT 10153 AND COUPLING MEMBER 10150 OF EMBODIMENT 13)

Specifically, "inner surface 10150p and a spherical surface 10153b of a drum shaft 10153 of [sic] the coupling 10150 are in engagement with each other." '765 patent at 62:28-30; *see also* '765 patent at 62:11-25. As discussed for the prior claim terms, that connection must be a pivotable connection in order to allow the coupling to incline between the claimed first and second positions. This is at least because each described embodiment shows a pivotable movement. *See, e.g., Alloc*, 342 F.3d at 1370 ("[T]his court looks to whether the specification refers to a limitation only as a part of less than all possible embodiments or whether the specification read as a whole suggests that the very character of the invention requires the limitation be a part of every embodiment.").

Canon's proposed "construction" here is simply a plea to reject the core concept of the Asserted Patents. As with the first two terms, Canon does not propose a construction that embraces the plain meaning in view of the specification in a way that would assist the Administrative Law Judge and the Commission in determining the proper scope of the claims. Instead, Canon comments on what it contends the claim doesn't mean, rather than saying what it does mean. Canon's proposal is not a meaningful attempt to shed light on the claim language; rather, it is an effort to broaden its claims far beyond what is actually described in the specification or what the inventors actually came up with. This tactic should be rejected.

Thus, the intrinsic evidence shows that "connected" in these claims should be construed as "connected [to the drum] in a manner than enables the claimed movement between co-axial and inclined positions."

Term 4: "[a coupling member having/including] a first end [portion] at least a part of which is positioned within the drum flange" ('021 patent, claim 1; '729 patent, claim 27; '764 patent, claim 20; '960 patent, claim 1; '846 patent, claim 1)

Respondents' Proposed Construction	Staff's Proposed Construction	Canon's Proposed Construction
"[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)	This term has its plain and ordinary meaning and no construction is necessary. The reference to "axis L2" in Respondents' and Staff's proposed construction is not appropriate.

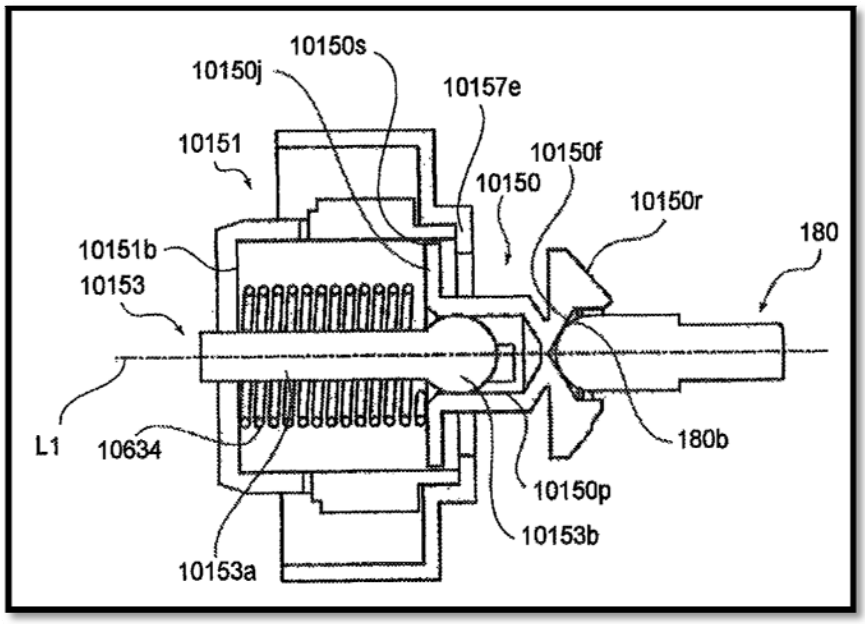
Respondents and the Staff propose similar constructions for this term—Respondents with an express construction and the Staff with the same construction as the plain and ordinary meaning. As with the rest of the terms thus far, Canon contends that the plain and ordinary meaning is sufficient.

Canon's sole complaint with Respondents and the Staff's proposal is that "[t]he reference to 'axis L2' … is not appropriate." But Respondents and the Staff's clarification is simply an acknowledgement of what the claims already undisputedly require: that the coupling member must have an axis L2. *See, e.g.*, '021 patent at 84:17 (claim 1, reciting "a coupling member having an axis L2").

Every asserted claim in this investigation plainly recites that the coupling member has an axis L2. While Respondents and the Staff's construction makes this point clear, Canon would

again prefer to inject unnecessary ambiguity in order to keep its claims hopelessly broad. Canon's resistance to acknowledging this simple fact is puzzling.[8]

The intrinsic evidence supports Respondents and the Staff's proposed construction for the same reasons as Term 2 ("axis L2"). Further, this term should be construed in the context of the rest of the claims and the specification. In particular, as shown in Figure 87 below, the first end of coupling member 10150 is within drum flange 10151:

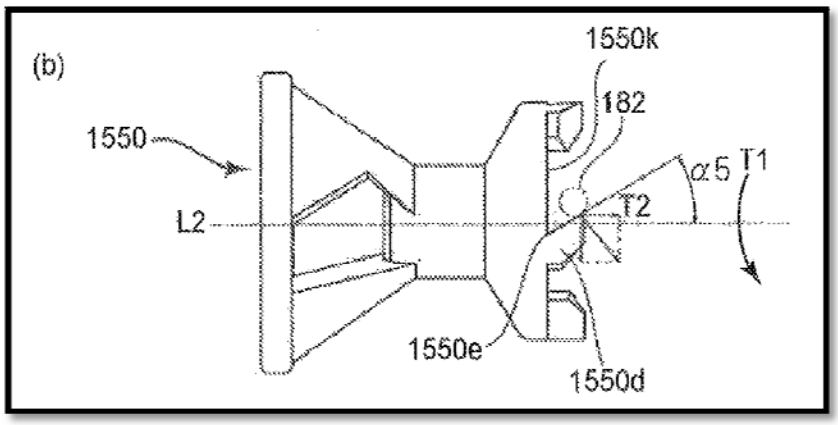


'765 PATENT, FIG. 87

As discussed for Term 2, the axis L2 is an "axis along the center of the coupling member that inclines in relation to axis L1 during pre-engagement and disengagement." In other words, axis L2 passes through the coupling member along its length irrespective of the angular position the coupling member takes. The first end portion is a part of the coupling member, and thus also

[8] Although the dispute here may be a minor one, Canon's refusal to accept even this basic aspect of its claims requires the Administrative Law Judge's guidance on this issue. *See O2 Micro*, 521 F.3d at 1361 ("A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute."). As the parties have proposed differing constructions, construction of this term is necessary here.

must share the same axis L2, as illustrated in the following figure, which shows the axis L2 extending through the entire coupling member, including the "first end portion" located on the left-hand side of the figure.



'765 PATENT, FIG. 29(B)

Respondents and the Staff's construction embraces the fact that the coupling member must have an axis L2, while Canon's proposal would ignore it. Respondents and the Staff's construction should be adopted.

Term 5: "at least one projection that is open to the axis L2" ('826 patent, claims 1, 6; '729 patent, claims 1, 9, 18; '764 patent, claim 7; '765 patent, claim 13)

Respondents' Proposed Construction	Staff's Proposed Construction	Canon's Proposed Construction
"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 Note: distinct from "rotational force receiving surface 150e" as described with Fig. 15	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

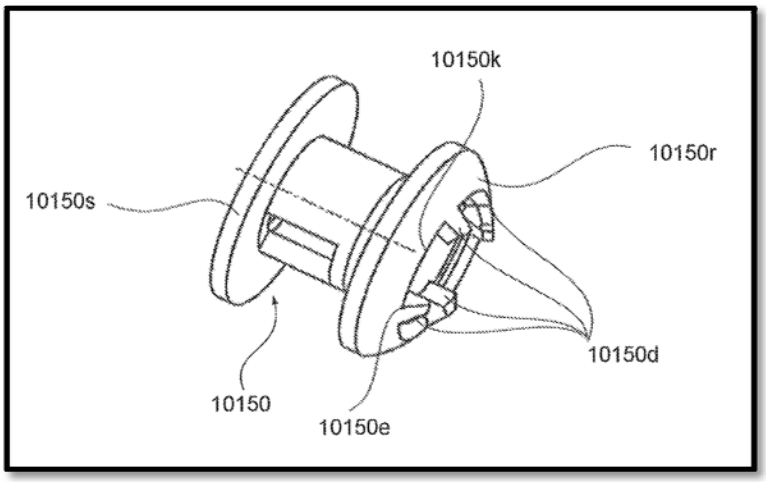
Respondents and the Staff propose the same construction for this claim term. Canon, however, contends that plain and ordinary meaning is sufficient, while simultaneously offering an alternative construction that significantly differs from the constructions proposed by Respondents and the Staff.

Both the intrinsic evidence and the specification support Respondents and the Staff's interpretation of this term. Canon's alternative definition, however, is directly contradicted by the intrinsic evidence and therefore fails.

Neither the claims nor the specification define "open to the axis L2." In fact, outside of the claims and the Abstract (which is derived from the claims), the phrase "open to" does not appear in the shared specification of the Asserted Patents.

Nevertheless, the specification's depiction and description of the claimed projections is consistent with Respondents and the Staff's construction. For example, as shown in Figure 86 (Embodiment 13), at least one of the projections 11150d, visually exhibits a shape where the

inner surface is a uniform distance from axis L2 and extends parallel to axis L2; in particular, the projection on the bottom right of Figure 86 below:

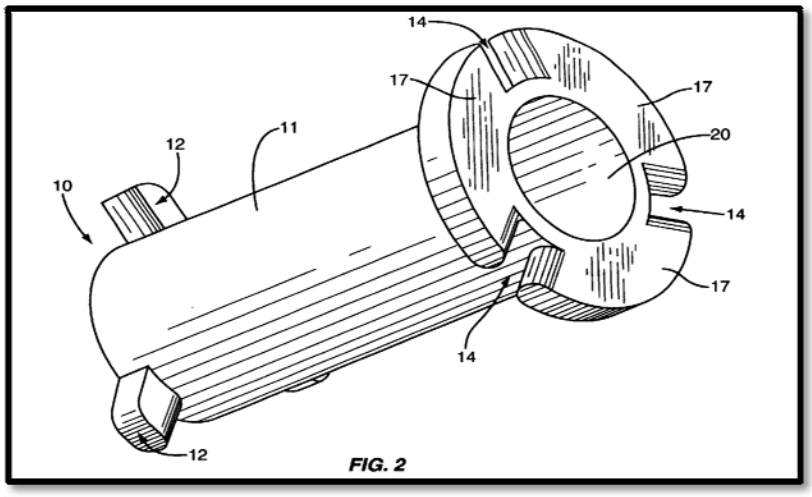


'765 PATENT, FIG. 86
(SHOWING PROJECTIONS 10150D WITH A CURVED SURFACE ON AN INNER SIDE)

According to the Asserted Patents, the shape of the projections can affect the stability of the rotational force transmitted through the claimed coupling member. The projections 150d have receiving surfaces 150e for receiving the rotational force from shaft 180, provided in the main printer assembly. *Id*. at 15:34-48; 17:1-2 ("the receiving surfaces 150e receive the rotational force from the drive shaft 180…"). According to the patents, the shape of the inner surface of the projections is important to correctly transmitting rotational force. *Id*. at 15:60-63 ("In order to stabilize the running torque transmitted to the coupling 150 as much as possible, it is desirable to dispose the rotational force receiving surfaces 150e on the same circumference that has the center on the axis L2."). At least one of the projections has an inner surface that is a uniform distance from axis L2. *Id*. at Figures 15, 86. In the lengthwise direction, the projections all extend along the axis L2. *Id*. Thus, this claim phrase should be construed to mean "at least one projection that has an inner surface that is a uniform distance from L2 and extends parallel to L2."

Canon contends that "open to" could mean that no portion of the coupling member lies between the projection and the axis L2. But this interpretation reads more into the claim language than exists in either the specification or the claims themselves. Nothing in the asserted claims and the specification explicitly indicates, with respect to "open to," whether any structure, or portion of a structure may, or may not be, between the projection and the axis L2. At the same time, Canon's construction would allow the inner surface to have any shape whatsoever, as long as no portion of the coupling member lies between the projection and the axis L2. Thus, Canon's construction would make meaningless a claim term which is already, based on the wording of the claim, difficult to understand.

Respondents and the Staff's construction is also more consistent with the prosecution history of the '826 patent than Canon's construction. In a February 10, 2017 Office Action, the examiner found that a prior art reference ("Portig") disclosed "at least one projection ([]17) that is open to the axis L2 (at least one of flanges 17 is a projection that is open to the axis of coupler 10)…." Feb. 10, 2017 Office Action in U.S. Patent App. No. 15/377,106 at 3 (attached as Ex. D). Figure 2 of Portig (attached as Ex. E) shows that flanges 17 (the "projections") extend directly from the coupling member:



PORTIG, FIG. 2

Thus, a part of the coupling member lies between the projections and the axis L2. The applicants never argued against the examiner's statement on this point. Rather, the applicants distinguished Portig on different grounds; thus, Canon had a chance to show how its invention could be different and show additional elements not shown by Portig, but it declined to do so with respect to the claim term at issue.

In contrast to Canon's current construction, Respondents and the Staff's construction is consistent with the examiner's interpretation. Each point of the base of each of Portig's projections (flanges 17), that is, the base where the projections meet "body portion 11" of the "coupler 10" in Portig, is an equal distance to the axis, and the inner surface of each flange 17 extends along the axis. *See* Portig (Ex. E) at 4:53-62; FIG. 2. Thus, each point on the inner surface of the projection is an equal distance from the axis of the coupling, and the inner surface extends parallel to the axis, consistent with Respondents and the Staff's proposed claim construction.

Thus, not only is Canon's construction insufficient to assist the Administrative Law Judge in resolving the disputes among the parties, it is also contrary to the intrinsic evidence. Canon's position should be rejected, and Respondents and the Staff's adopted.

B. The Agreed-Upon Terms

Term 6: "as measured in the direction of the axis L1" ('826 patent, claims 1, 6; '021 patent, claim 1; '729 patent, claims 1, 9, 18, 27; '764 patent, claim 7; '765 patent, claims 1, 4, 13; '960 patent, claim 1; '846 patent, claim 1)

Agreed Construction
"as measured along an imaginary extension of axis L1 or an imaginary line parallel thereto"

The parties have agreed that "as measured in the direction of the axis L1" should be construed to mean "as measured along an imaginary extension of axis L1 or an imaginary line parallel thereto."

Term 7: "when the coupling member takes the first position" ('826 patent, claim 6)

Agreed Construction
"when the coupling member is in the first position, wherein 'first position' has the same meaning that it has in term 1"

The parties have agreed that "when the coupling member takes the first position" should be construed to mean "when the coupling member is in the first position, wherein 'first position' has the same meaning that it has in term 1." In other words, if the Administrative Law Judge agrees that the "first position" is an engaged position, as proposed by Respondents and the Staff, that meaning should also apply here.

IV. CONCLUSION

For the reasons presented in this brief, Respondents respectfully request that the preceding claim terms be construed as proposed by Respondents and the Staff.

Dated: July 26, 2018

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CERTIFICATE OF SERVICE

I, Robert E. Rude hereby certify that on this 26th day of July, 2018, copies of **RESPONDENTS' INITIAL *MARKMAN* BRIEF** were served on the following:

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The Honorable Dee Lord Administrative Law Judge U.S. INTERNATIONAL TRADE COMMISSION 500 E. Street, SW, Room 317 Washington, DC 20436	Via Hand-Delivery (2 copies)
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Bluedog Distribution Inc. 450 North Park Road, Suite 810 Hollywood, Florida 33021	Via First Class Mail
Do It Wiser LLC d/b/a Image Toner 3422 Old Capitol Trail, #747 Wilmington, Delaware 19808	Via First Class Mail
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APPENDIX 1: LIST OF EXHIBITS

Exhibit	Description
Ex. A	Joint Stipulation Regarding Representative Accused Products, Inv. No. 337-TA-918 (Oct. 8, 2014)
Ex. B	Excerpts of Canon's Resp. to Ninestar Interrogatories Nos. 1-79 (served April 25, 2018)
Ex. C	Excerpts of Canon's Resp. to Ninestar Requests For Admission Nos. 1-23 (served May 29, 2018)
Ex. D	Office Action to U.S. App. No. 15/337,106 (February 10, 2017)
Ex. E	U.S. Patent No. 6,397,029 ("Portig")
Ex. F	U.S. Patent No. 9,857,765