

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

ZIPSTRING, LLC,

Plaintiff,

v.

NXTGEN TOYS, LLC, LIVE GLEAM LLC,
and BENZION SADIGURSKY,

Defendants.

Case No. 1:24-cv-00136-TCB

DEFENDANTS' OPENING CLAIM CONSTRUCTION BRIEF

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Pursuant to the Local Patent Rule 6.5(a), Defendants submit their opening claim construction brief as follows:

1. The Asserted Patents

Plaintiff asserts United States Patent Nos. 11,674,774 ('774 patent), 11,879,703 ('703 patent'), and 11,918,927 ('927 patent'). The '774 and '703 patents share a common specification.¹ The '774 patent is entitled "String Shooting Device" and issued on June 13, 2023. (Ex. 1, '774 patent.) The '703 patent is likewise entitled "String Shooting Device" and issued on January 23, 2024. (Ex. 2, '703 patent.) The '927 patent is entitled "Glow-in-the-Dark String and String Shooting Device" and issued on March 5, 2024. (Ex. 3, '927 patent.)

A. Relevant Teachings

(1) The '774 and '703 Patents

The string shooter described in the '774 and '703 patents is depicted in Figure 1:

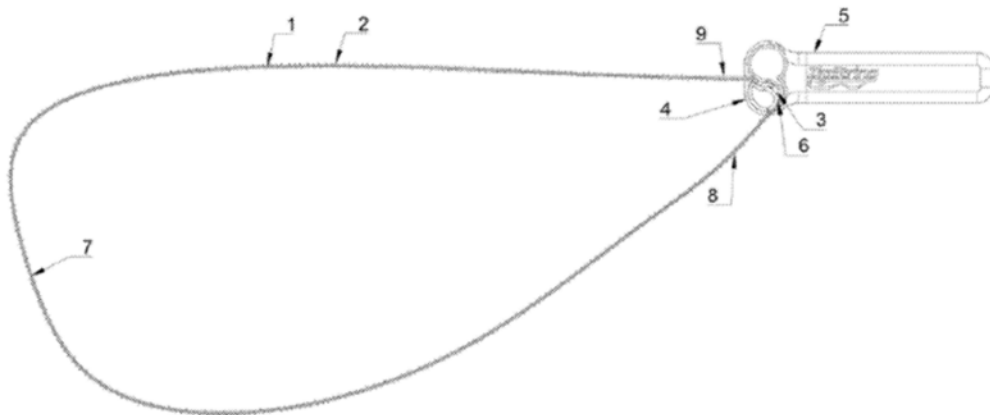


FIG. 1

¹ Unless otherwise noted, citations to the '703 patent refer to the parent '774 patent.

(Ex. 1 at Fig. 1.) The string shooter includes a looped string (1) having radiating threads (2) propelled by a drive wheel (3) and driven by a motor (4). The string shooter includes a body (5) which houses a power source to power the motor (4) that turns the drive wheel (3). (*Id.* at 4:52-5:5.)

The '774 and '703 patents further describe various components of a housing. Figure 7 illustrates the housing (100):

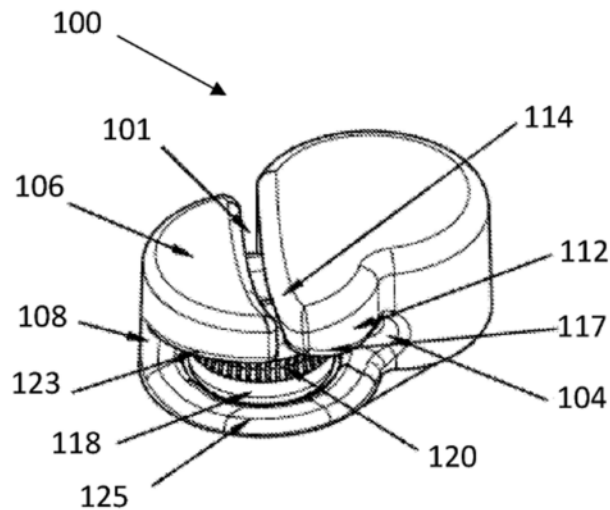


FIG. 7

(*Id.* at Fig. 7.) The housing (100) includes a loading slot (101). (*Id.* at 9:36-41.) “[L]oading slot 101 guides the looped string to fit into a gap between [a] pair of wheels.” (*Id.* at 8:55-57.) “[A] user is able to insert the looped string into the loading slot 101 and slide it across a top of a first wheel 118 to fit between the pair of wheels.” (*Id.* at 9:7-10.) “The loading feature is configured to facilitate the quick and easy swapping of looped strings while also securely holding the looped string between the wheels when the device is operating.” (*Id.* at 9:13-16.)

The housing 100 further includes an “integrated guiding slot” 108” that “allows the returning part of the looped string to approach the drive wheel and fit into a groove found in one

or both of the drive wheel and the guide wheel.” (*Id.* at 9:17-21.) “[T]he guide slot urges the string back to the operational position between the drive wheel and the guide wheel.” (*Id.* at 9:32-34.)

Additionally, the housing (100) includes a loading tab (102), as illustrated in Fig. 6:

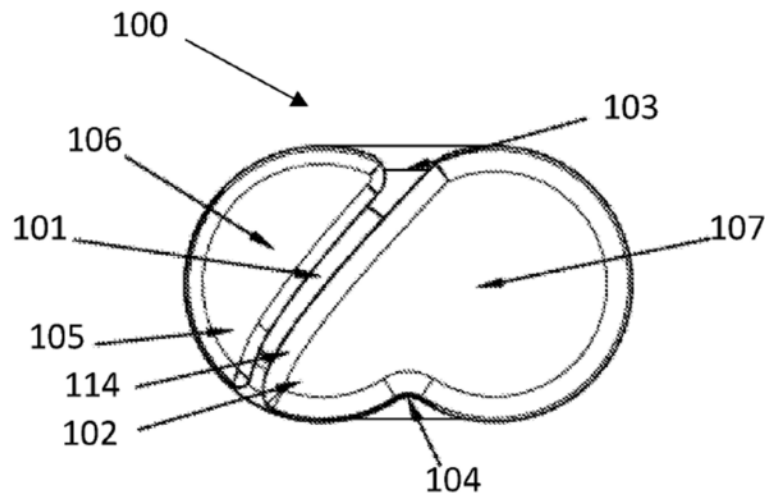


FIG. 6

(*Id.* at Fig. 6.) “[T]he loading tab 102 functions as a ramped guide to guide the string from the loading slot to the intake aperture 104. This loading tab feature adds protection against the looped string sliding off of the drive wheel during operation, and leads the looped string into the intake aperture while loading the looped string into the device.” (*Id.* at 8:67-9:6.)

(2) The '927 Patent

The '927 patent describes a string shooter having a string capable of emitting light absorbed from a light source. (Ex. 3 at Abstract.) Fig. 16 illustrates the string shooter with light source (204):

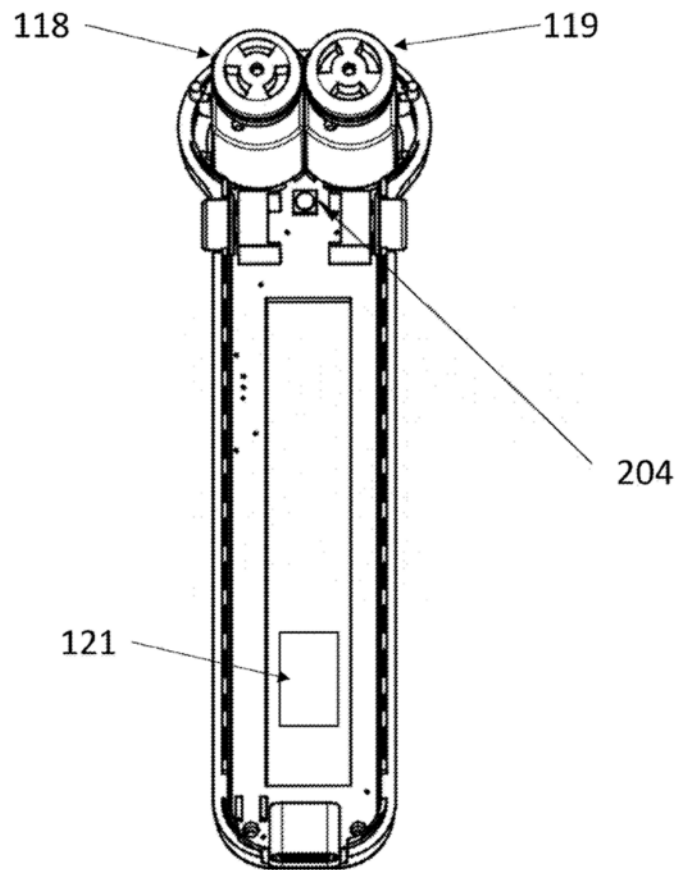


FIG. 16

(*Id.* at Fig. 16.) “Light source 204 is positioned to direct the light emitted from light source 204 directly onto a travel path of the looped string having phosphorescent particles or fibers in or on it.” (*Id.* at 13:52-55.) “[A] light guide and/or a light shroud may be configured to respectively focus [and] and/or strategically conceal light emitted from light source 204.” (*Id.* at 14:36-38.)

B. Prosecution History of the Asserted Patents

(1) Relevant Prosecution of the '774 Patent

During prosecution of the '774 patent, the Examiner issued a single Office Action, rejecting some of the pending claims. (Ex. 4, '774 patent file history at 65-77 (Office Action, Feb. 15, 2023).) Plaintiff responded by amending claim 1 to include the following limitation:

wherein the string defines an axis along which the string extends, and wherein the string comprises a plurality of fibers extending away from the axis.

(*Id.* at 55 (Resp. to Office Action, March 28, 2023).)

Plaintiff further amended claim 11 to include the following limitation:

wherein the looped string defines an axis along which the string extends, and wherein the looped string comprises a plurality of fibers extending away from the axis.

(*Id.* at 56 (Resp. to Office Action, March 28, 2023).)

Lastly, Plaintiff amended claim 15 to include the following limitation:

a looped string, wherein the looped string comprises a surface texture configured to increase air friction in response to the looped string being propelled through air by the pair of wheels.

(*Id.* at 57 (Resp. to Office Action, March 28, 2023).)

In view of the claim amendments, the Examiner issued a notice of allowance. (*Id.* at 14-16 (Notice of Allowance, April 7, 2023).)

(2) Relevant Prosecution of the '703 Patent

The '703 patent was also subject to a single Office Action. (Ex. 5, '703 patent file history at 87-100 (Office Action, Sept. 27, 2023).) Plaintiff amended the claims to overcome the rejections set forth in the Office Action.

Plaintiff responded by amending claim 1 as emphasized:

A device for propelling a *looped* string

wherein the first wheel side and the second wheel side face a same direction;

and

wherein the string loading slot facilitates loading of the looped string through the string loading slot to a position between the first wheel and the second wheel.

(*Id.* at 58 (Resp. to Office Action, Nov. 20, 2023) (emphasis added).)

Plaintiff amended claim 11 to require that:

wherein the first wheel cover portion and the second wheel cover portion are separated by the string loading slot.

(*Id.* at 59 (Resp. to Office Action, Nov. 20, 2023).)

Regarding claim 1, Plaintiff stated that:

[c]laim 1 has further been amended to recite wherein the string loading slot facilitates loading of the looped string through the string loading slot to a position between the first wheel and the second wheel. Applicant asserts that this feature is inherent in the string loading slot term itself; however, clarified the claim by adding this element.

(*Id.* at 62 (Resp. to Office Action, Nov. 20, 2023) (emphasis and internal quotations omitted).)

Plaintiff further stated that:

[t]he claimed “string loading slot” specifically recites “loading”, as the slot facilitates string loading to the tool. Under the broadest reasonable interpretation, a “string loading slot” is a slot that facilitates loading of the string into the device of claim 1.

(*Id.* at 63 (Resp. to Office Action, Nov. 20, 2023) (internal quotations omitted).)

As to claim 11, Plaintiff stated that:

Matsuzaki fails to teach or suggest a string loading slot. Further, the barrel 20, alleged to be the string loading slot, is not defined between a first wheel cover portion and a second wheel cover portion, and the string loading slot does not separate the first wheel cover portion from the second wheel cover portion.

(*Id.* at 65 (Resp. to Office Action, Nov. 20, 2023).)

As to claim 17, Plaintiff stated:

[t]he Office Action appears to suggest that the intake aperture 182 teaches the claimed guiding slot and the intake aperture; however, the intake aperture 182 does not extend about at least a portion of an outer perimeter of the first wheel to reach an intake aperture.

(*Id.* at 66 (Resp. to Office Action, Nov. 20, 2023) (internal quotations omitted).)

In view of the claim amendments and Plaintiff's arguments that the cited art does not teach the limitations, the Examiner issued a notice of allowance. (*Id.* at 19-23 (Notice of Allowance, Dec. 1, 2023).)

(3) Relevant Prosecution of the '927 Patent

The Examiner issued a notice of allowance without issuing an Office Action. (Ex. 6, '927 patent file history at 74-79 (Notice of Allowance, Oct. 31, 2023). In the Notice of Allowance, the Examiner made the following amendment to claim 13:

[c]laim 13, line 6, after "illuminate", insert --a location on a path of travel of a string propelled by the string shooting device. --; delete lines 7 and 8.

(*Id.* at 77 (Notice of Allowance, Oct. 31, 2023).)

The Examiner stated the reasons for allowance as follows:

no prior art of record, alone or in combination, teaches or fairly suggests a string shooting device comprising a body; a housing attached to the body; a pair of wheels disposed at least partially within the housing, wherein at least one of the pair of wheels is a driven wheel; a string comprising at least one of phosphorescent particles or phosphorescent fibers, and wherein the string is propelled along a path by the pair of wheels; and a light source is configured to project illumination to the path along which the string travels within the housing.

(*Id.* at 77-78 (Notice of Allowance, Oct. 31, 2023).)

2. Legal Framework

A. Level of Ordinary Skill in the Art

A person of ordinary skill in the art (POSITA) would have a bachelor's degree in mechanical engineering, aerospace engineering, physics or other science or engineering based degree, be familiar with general principles of mechanics and aerodynamics, and have at least two years of experience in product design and development in the field of toys or other amusement-

type devices. Other combinations of education with relevant practical experience may also qualify one as a POSITA, as the case may be.

B. Claim Construction

“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) (internal quotation and citation omitted). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-80 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (internal quotation and citation omitted).

When a court relies solely upon the intrinsic evidence—the claims, the specification, and the prosecution history—the court’s construction is a determination of law. *See Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331 (2015). “A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

Courts may also make findings based upon extrinsic evidence, which “consists of all evidence external to the patent and prosecution history.” *Phillips*, 415 F.3d at 1317-19 (internal quotation and citation omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.*

C. Indefiniteness

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). A patent must be precise enough to afford clear notice of what is claimed. *Id.* at 2129.

3. Claim Terms for Construction

A. Agreed Terms

The parties have agreed on the construction of claim terms “surface texture [of string] to increase air friction,” “turbulent air boundary layer,” “project illumination,” “within the body,” “generates lift,” “housing,” “axially aligned,” “aperture,” “within the housing,” and “portion.” (See Doc. 23 at 1-2.)

B. Disputed Terms

The parties dispute the construction of five terms as follows: (1) “loading slot,” (2) “guide slot” / “guiding slot,” (3) “loading tab,” (4) “about at least a portion,” and (5) “configured to illuminate a location on a path of travel of a string.” Defendants assert that claim terms “about at least a portion” and “configured to illuminate a location on a path of travel of a string” are indefinite.

(1) “Loading Slot”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
slot through which the string is loaded or removed from between the pair of wheels	slot that facilitates loading of the looped string through the string loading slot to a position between a first wheel and a second wheel

The dispute regarding “loading slot” centers on whether the loading slot must “facilitate loading.” The parties appear to agree that the “loading slot” is a slot which allows the string to be positioned between a pair of wheels.

Throughout the specification, the loading slot is described as facilitating loading of the string between the first wheel and the second wheel. (*See, e.g.*, Ex. 1 at 9:7-16 (“according to embodiments, a user is able to insert the looped string into the loading slot 101 and slide it across a top of the first wheel to fit between the pair of wheels The loading feature is configured to facilitate the quick and easy swapping of looped strings while also securely holding the looped string between the wheels”).)

Further, during prosecution of the ’703 patent Plaintiff specifically stated that it is inherent that the “loading slot” facilitates loading of the string. (Ex. 5 at 62 (Resp. to Office Action, November 20, 2023) (“Claim 1 has further been amended to recite ‘wherein the string loading slot facilitates loading of the looped string through the string loading slot to a position between the first wheel and the second wheel’. Applicant asserts that this feature is inherent in the “string loading slot” term itself; however, clarified the claim by adding this element.”).) Plaintiff further stated “[t]he claimed ‘string loading slot’ specifically recites ‘loading’, as the slot facilitates string loading to the tool. Under the broadest reasonable interpretation, a ‘string loading slot’ is a slot that facilitates loading of the string into the device of claim 1.” (*Id.* at 63 (Resp. to Office Action, Nov. 20, 2023).)

Thus, the proper construction of “loading slot” must include that the “loading slot” facilitates loading of the string. Plaintiff’s proposed construction does not account for this. The Court should accordingly adopt Defendants’ construction, which aligns with Plaintiff’s description of the loading slot during prosecution.

(2) “Guide Slot” / “Guiding Slot”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
slot extending around a portion of the circumference of at least one of the pair of wheels	a slot different from the loading slot that moves the string to the operation position between a drive wheel and a guide wheel

Here, the parties agree that the “guide slot” / “guiding slot” terms should be accorded the same construction. Defendants’ position is that “guide slot” must define a slot different from the loading slot.

First, claim 12 of the ’703 patent introduces both a loading slot and a guide slot, such that the terms must define two separate slots. (*See* Ex. 2 at 13:9-20.) Second, the ’774 patent describes the differences between the two slots stating that “[t]he loading slot 101 connects with the exit aperture 103 on a front and intersects with the guiding slot 108 on a back side of the left wheel housing.” (*Id.* at 10:17-19.) Fig. 7 of the ’774 patent further illustrates the loading slot 101 and the guide slot 108 as separate slots:

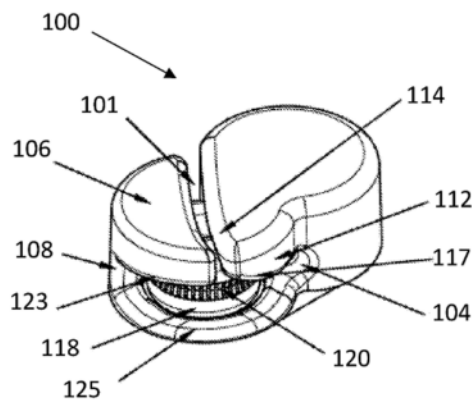


FIG. 7

(*Id.* at Fig. 7.) Therefore, as described in the ’774 and ’703 patents, the loading slot and the guide slot are different slots.

Turning to Plaintiff's proposed construction, Plaintiff simply repeats the claim limitations surrounding the term "guide slot," such that substituting Plaintiff's proposed construction into representative claim 3 of the '703 patent would recite:

a [slot extending around a portion of the circumference of at least one of the pair of wheels] extends about at least a portion of the outer perimeter of the first wheel to an intake aperture axially aligned with a gap between the first wheel and the second wheel.

Plaintiff's construction interjects unnecessary and duplicative language into the claim, as the guiding slot is required to extend around a portion of a circumference of at least one of the pair of wheels, and also extend about at least a portion of the outer perimeter of the first wheel. For this reason alone, Plaintiff's proposed construction should be rejected.

Plaintiff's proposal is also inconsistent with the specification of the '774 patent, which sets forth that "[t]he housing 100 features an integrated guiding slot 108 which, when in operation, allows the returning part of the looped string to approach the drive wheel and fit into a groove found in one or both of the drive wheel and the guide wheel." (*Id.* at 9:17-21.) Further, the '774 patent informs that "the guide slot urges the string back to the operational position between the drive wheel and the guide wheel." (*Id.* at 9:32-34.) The '774 and '703 patents clearly teach that the guide slot is a slot that moves the string to the operation position between the drive wheel and the guide wheel, consistent with Defendants' proposed construction.

(3) "Loading Tab"

Plaintiff's Proposed Construction	Defendants' Proposed Construction
a structure which guides the string from the loading slot to the intake aperture	a tab extending from the loading slot that leads the string into the intake aperture

Once again, Plaintiff's construction of "loading tab" repeats the language of claim 7 of the '703 patent and defines the tab as any structure. Replacing the term "loading tab" in claim 7 of the '703 patent with Plaintiff's proposed construction leaves the claim to recite:

wherein [a structure which guides the string from the loading slot to the intake aperture] functions to guide the string from the loading slot to the intake aperture.

This cannot be correct.

Importantly, Plaintiff should not be allowed to attempt to broaden the plain claim language beyond the specifically recited “tab” to include any generic structure. Such a broadening construction would be improper. *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1355 (Fed. Cir. 2006) (claims do not “enlarge what is patented beyond what the inventor has described as the invention”).

Defendants’ construction follows the express teachings provided in the ’774 and ’703 patents which instruct that “the loading tab functions as a ramped guide to guide the string from the loading slot to the intake aperture 104. This loading tab feature adds protection against the looped string sliding off of the drive wheel during operation, and leads the looped string into the intake aperture 104 while loading the looped string into the device.” (Ex 2. at 8:67-9:6.) The construction should thus be adopted.

(4) “About at Least a Portion”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
See 10 above re “portion”; plain and ordinary meaning; a part of any whole; The claim term meets the requirements of 35 U.S.C. § 112 and therefore is definite. There is adequate disclosure in the specification such that one of ordinary skill in the art would understand the meaning of the term.	indefinite

The term “about at least a portion” is indefinite. Determining indefiniteness “requires a determination whether those skill in the art would understand what is claimed.” *Amgen, Inc. v. Chugai Pharmaceutical Co. LTD*, 927 F.2d 1200, 1217 (Fed Cir. 1991). Recited in claims 3 and 17 of the ’703 patent, representative claim 3 is set forth below:

3. The device of claim 1, wherein a guiding slot extends *about at least a portion* of the outer perimeter of the first wheel to an intake aperture axially aligned with a gap between the first wheel and the second wheel.

(Ex. 2 at 12:44-47 (emphasis added).) It is entirely unclear what the word “about” is intended to convey beyond the words “at least” and “portion.” For example, “about” could mean “reasonably close to,” “almost” or “approximately,” which would align with the description of such tolerance related terms in the ’703 patent. (See *id.* at 3:58-61 (“The terms “approximately,” “generally,” and “substantially” refer to within manufacturing and/or engineering design tolerances for the corresponding materials and/or elements unless otherwise indicated.”).) Similarly, “at least” is generally understood to refer to “not less than” a specified amount, distance, etc. and at a specified “minimum.”

Using these meanings of “about” and “at least” in conjunction with Plaintiff’s proposed construction of “portion” results in the following recitation in claim 3:

“wherein a guiding slot extends [approximately not less than a part of any whole] of the outer perimeter of the first wheel to an intake aperture axially aligned with a gap between the first wheel and the second wheel.”

Again in this context, it is unclear what is meant by “about at least a portion” of the outer perimeter of the first wheel. A POSITA would not be able to determine the metes and bounds of the invention, as it is unclear what “about” “at least” a “portion” could include, or does not include, relative to the outer perimeter of the first wheel. See *Amgen, Inc. v. Chugai Pharmaceutical Co. LTD*, 927 F.2d 1200, 1218 (Fed Cir. 1991) (finding “at least about 160,000 IU/AU” to be indefinite). Stacking the word “at least” on top of “about” in the context of a “portion” renders the claim indefinite. This is particularly problematic here, as the specifications of the asserted patents do not provide any specifics with respect to ranges, amounts, or quantifications that could satisfy the claims.

(5) “Configured to Illuminate a Location on a Path of Travel of a String”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
designed to light a portion of a path along which the string travels; The claim term meets the requirements of 35 U.S.C. § 112 and therefore is definite. There is adequate disclosure in the specification such that one of ordinary skill in the art would understand the meaning of the term.	indefinite

In this instance, the indefiniteness arises from the spacing between “configured to illuminate” and “a location on a path of travel of a string” as recited in claim 13 of the ’927 patent. Claim 13 reads as follows:

13. A string shooting device comprising:
a body;
a housing attached to the body;
a pair of wheels disposed at least partially within the housing, wherein at least one of the pair of wheels is a driven wheel; and
a light source, wherein the light source is configured to illuminate
a location on a path of travel of a string propelled by the string shooting device.

(Ex. 3 at 18:1-11.)

It is not possible to determine whether the claim requires the light source simply be “configured to illuminate” rendering “a location on a path of travel of a string” a separate element, or whether the light source must illuminate the location. The spacing defect is incurable as there are two equally logical constructions and there is no indication in the claims or the specification of the ’927 patent as to which construction should be adopted. A POSITA would not be able to determine whether the light source only needs to be configured to illuminate

generally or whether the light source must be configured to illuminate a location on a path of travel. Thus, the term is indefinite.

4. Conclusion

For the foregoing reasons, Defendants request that the Court adopt their proposed constructions for the disputed terms and deny Plaintiff's proposed constructions, and otherwise find the terms so identified to be indefinite, and all other relief to which they may be entitled.

Dated: January 6, 2025.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on January 6, 2025, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants.

/s/Jason A. Wietjes

Jason A. Wietjes