IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK

ROAD WIDENER, LLC,

Plaintiff,

Civil Action No.
1:20-CV-160 (DNH/TWD)

v.

ROBERT H. FINKE & SONS, INC.,

Defendant.

APPEARANCES:

OF COUNSEL:

FOR PLAINTIFF:

REINHART BOENER VAN DEUREN s.c.
22 East Mifflin Street
Suite 700
Madison, WI 53703

MONICA A. MARK, ESQ.
PAUL J. STOCKHAUSEN, ESQ.
DAVID G. HANSON, ESQ.
JESSICA H. POLAKOWSKI, ESQ.

HODGSON, RUSS LAW FIRM
677 Broadway
Suite 301
Albany, NY 12207

CHRISTIAN J. SOLLER, ESQ

FOR DEFENDANT:

LEASON ELLIS LLP
One Barker Avenue
5th Floor
White Plains, NY 10601

CAMERON S. REUBER, ESQ.
LORI LEIGH COOPER, ESQ.

ICE MILLER LLP
1500 Broadway
29th Floor
New York, NY 10036

SAFET METJAHIC, ESQ.

DAVID E. PEEBLES
U.S. MAGISTRATE JUDGE

REPORT AND RECOMMENDATION

This is a patent infringement action between Road Widener, LLC ("Road Widener") and Robert H. Finke & Sons, Inc. ("Finke & Sons), two companies engaged in the marketing of equipment utilized in the road construction industry. At issue is a patent describing a flexible skid steer attachment device designed for use in paving shoulders and widening roads. Road Widener contends that Finke & Sons infringes the subject patent by importing, offering for sale, and selling a product manufactured by an off-shore company.

Despite their best efforts, the parties have been unable to agree on the proper constructions attributable to several terms included within the patent claims asserted by Road Widener. The question of claim construction has been referred to me for the issuance of a report and recommendation. Based upon the parties' written submissions and a claim construction hearing conducted recently in the matter, I make the following recommendations concerning the contested claim terms.

I. BACKGROUND

The infringement claims asserted in this action stem from United States Reissued Patent No. U.S. RE46,971 (the "'971 Patent"), which is entitled "FLEXIBLE SKID STEER ATTACHMENT DEVICE" and was reissued on July 31, 2018, to Inventor Duane A. Neumann of Jefferson, Wisconsin, and has been assigned to Road Widener.[1] Dkt. No. 1 at 2; Dkt. No. 1-1 at 2. The '971 Patent traces its roots to an earlier patent, U.S. Patent No. 8,322,947, issued on December 4, 2012. *Id.* Road Widener practices the '971 Patent through various products designed to "attach to a skid steer and function to widen roads through the addition of a shoulder more efficiently and cost-effectively than traditional road wideners." Dkt. No. 1 at 3.

The '971 Patent represents an improvement over U.S. Patent No. 7,540,687 (the "'687 Patent"), also issued to Inventor Neumann, which discloses a similar device that "has enjoyed an extensive market presence." '971 Patent at 1:62-1:65, 2:24-2:27. The '971 Patent was designed to overcome a misalignment problem prevalent in the '687 Patent, whereby the conveyer belt system "would become misaligned due

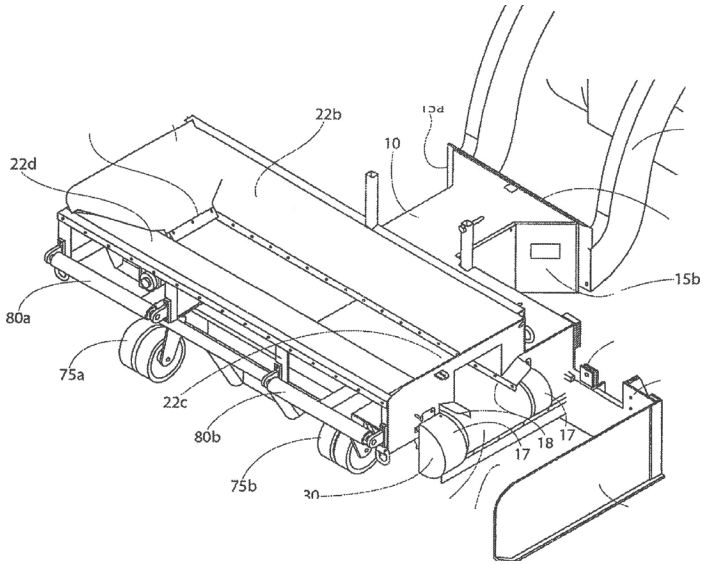
[1] The '971 Patent appears at several locations in the record including, *inter alia*, as Exhibit A to Road Widener's complaint. *See* Dkt. No. 1-1.

to the pressure from debris coming in contact with the belt over time, as well as from the motion of the vehicle," requiring the belt be realigned. *Id.* at 1:66-2:5. This issue is addressed in the patent in suit by designing the skid steer attachment in a way that affords the operator more control over the placement of the debris. '971 Patent at 2:21-2:24.

The '971 Patent invention, which is a relatively simple mechanical device, is described as follows:

> The present invention is comprised of improved support components, an improved hopper design that optimizes the angle of deflection for debris, design dimensions and reduced sized rollers that eliminate the need for disassembly of the device for transport, a hopper deflection component, and a shortened flap design. Additionally, two tandem casters are used to more equally distribute the weight of the apparatus reducing the number of casters needed.

'971 Patent at 2:27-2:35. A representative embodiment of the invention disclosed in the '971 Patent specification is shown below:



'971 Patent, Amended Figure 1. Amended Figure 1 depicts an exemplary embodiment of a flexible skid steer road widening and shoulder attachment device **100** attached to a skid steer **200**.

The dispute in this action centers upon the hopper **20**, disclosed in the '971 Patent, which is

> comprised of walls **22a, 22b, 22c, 22d** angled inward to facilitate the movement of debris (e.g. gravel) onto conveyor system **30** which makes up the bottom of hopper **20**. Conveyer system **30** rinses debris away from wall **22a** of hopper **20** and toward spreader system **40**. In the embodiment shown [Amended Figure 1], conveyer system **30** is comprised of conveyer belt **35** and a plurality of rollers that are horizontally aligned beneath the lower opening of hopper **20**.

'971 Patent at 3:17-3:24.

The patent's specification goes on to provide as follows:

> In the embodiment shown [Amended Figure 1], walls **22a, 22b, 22d** of hopper **20** are gently angled toward conveyer belt **35** which slows the speed and force at which debris is pushed onto conveyer belt **35** decreasing the chance that the weight of the debris will force conveyer belt **35** off its rollers.
>
> In an exemplary embodiment, wall **22c** is substantially vertical relative to conveyer belt **35** (at an approximate 90 degree angle) to facilitate attachment of hopper **20** to support frame **10**. Walls **22b, 22a** and **22d** are all placed at varying angles ranging from 100 to 170 degrees (as measured from a point on a horizontal plane inside hopper **20**) to deflect debris onto conveyor belt **35**.
>
> FIG. **1** also illustrates vertical drop component **18** which deflects debris from walls **22a, 22b, 12d** [sic] vertically onto conveyer belt **35**, rather than laterally, so as not to cause pressure on the conveyer belt **35** leading to misalignment over time.
>
> In the embodiment shown, conveyer belt **35** further includes a pulley *16* that is at least 2 inches wider than conveyer belt **35** to prevent conveyer belt **35** from moving off the edge of the pulley *16. The pulley 16 is concealed by a guard 17 in FIG. 1, but is partially visible in FIGS. 2b and 3*. This design modification substantially decreases delay resulting from malfunction.

'971 Patent at 3:25-3:48.[2]

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[2] According to the '971 Patent, matter printed in italics represents additions made by the reissue, whereas bracketed excerpts constitute material deleted from the original patent. '971 Patent at 1:7-1:8.

II. PROCEDURAL HISTORY

This action was commenced on February 18, 2020. Dkt. No. 1. In its complaint, Road Widener alleges that Finke & Sons has infringed at least independent Claims 1, 10, and 15 of the '971 Patent by offering to sell, selling, and/or importing into the United States skid steer attachments under the brand name ShoulderMaster, a product developed by Stabilcorp Pty Ltd., an Australian Road Construction Company. *Id.* at 7-10. Finke & Sons has since answered Road Widener's complaint, generally denying its material allegations, asserting various affirmative defenses including, *inter alia*, non-infringement, patent invalidity, prosecution history estoppel, and inequitable conduct, and additionally interposing counterclaims seeking declarations of non-infringement and patent invalidity. Dkt. No. 20.

In accordance with the court's local patent rules, the parties have conferred and submitted a joint claim construction statement revealing their disagreement concerning several claim terms contained within the '971 Patent. Dkt. No. 32. The issue of claim construction has been referred to me for the issuance of a report and recommendation pursuant to 28 U.S.C. § 636(b)(1)(B). Dkt. No. 47. In accordance with that referral, a claim construction hearing was conducted on April 14, 2021. Text Minute Entry dated 4/14/21. At the conclusion of the hearing, I reserved decision

and indicated that I would provide a written report and recommendation to District Judge David N. Hurd concerning the issue of claim construction.

III. DISCUSSION

A. Claim Construction: The Legal Framework

Patent claim construction is a mixed issue of law and fact to be decided by the court. *Teva Pharmas. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331-32 (2015). When the court "reviews . . . evidence intrinsic to the patent (the patent claims and specification, along with the patent's prosecution history), the . . . determination will amount . . . to a determination of law[.]" *Teva Pharmas. USA, Inc.*, 574 U.S. at 331. When the court "look[s] beyond the patent's intrinsic evidence" and consults extrinsic to provide accurate interpretations of disputed claims, the determinations are considered "subsidiary factual findings." *Id.* Subsidiary factual findings have been described as "the 'evidentiary underpinnings' of claim construction." *Id.* at 331-32.

When construing a patent, as a general rule, a court assigns disputed terms their ordinary and customary meaning as they would have been understood by a person of ordinary skill in the art ("POSITA") when read in the context of the patent specification and prosecution history.[3]

[3] The parties did not address the characteristics of a POSITA in their briefs. When

Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 904 F.3d 965, 971 (Fed. Cir. 2018); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a [POSITA] in question at the time of the invention[.]" *Phillips*, 415 F.3d at 1313; *accord, Finjan, Inc. v. Cisco Sys., Inc.*, 837 F. App'x 799, 804 (Fed. Cir. 2020).

There are two exceptions to this general rule, only one of which is relevant to this action. In particular, a claim term will be afforded a different meaning other than its ordinary one when the patentee disavows the full scope of the term either in the patent specification or during prosecution of the patent application. *Butamax(TM) Advanced Biofuels LLC v. Gevo, Inc.*, 746 F.3d 1302, 1309 (Fed. Cir. 2014); *Thorner v. Sony Computer Entm't Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). "A disavowal must be clear, but it need not be explicit." *Techtronic Indus. Co. Ltd. v. Int'l Trade Comm'n*, 944 F.3d 901, 907 (Fed. Cir. 2019) (internal quotation marks omitted). "Disavowal may be inferred from clear limiting descriptions of the invention in the specification or prosecution history," or "an inventor may . .

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questioned regarding the issue during the hearing, their counsel generally stated that significant experience in the road construction industry would be a key requirement. I recommend that the court accept this somewhat vague definition of a POSITA for purposes of this case.

. disavow claim scope by distinguishing the claimed invention over the prior art." *Techtronic Indus. Co. Ltd.*, 944 F.3d at 907 (internal quotation marks omitted). This exception to the general rule that patent terms should be given their ordinary meaning is both narrow and exacting. *Thorner*, 669 F.3d at 1366-67.

While the words of a patent claim will generally control, they must not be interpreted in isolation and the POSITA "is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. A patent's specification often constitutes the "single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 7576, 1582 (Fed Cir. 1996); *accord, Phillips*, 415 F.3d at 1314. In this respect, a patent specification, which is like an internal dictionary, must be carefully reviewed to determine whether, for example, the inventor has used a particular term in a manner inconsistent with its ordinary meaning. *Vitrionics Corp.*, 90 F.3d at 1582. When resorting to a patent's specification for guidance with respect to disputed claim terms, a court must consider it as a whole and, where possible, all portions should be read in a manner that renders the patent internally consistent. *Budde v. Harley-Davidson, Inc.*, 250 F.3d

1369, 1379-80 (Fed. Cir. 2001).

Although the language of a patent specification can provide important clues regarding the proper construction of a disputed claim term, there are limitations upon its usefulness. "[W]hile it is true that claims are to be interpreted *in light of* the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims[.]" *Sjolund v. Musland*, 847 F.2d 1573, 1581 (Fed. Cir. 1988) (emphasis in original); *accord, Kinik Co. v. Int'l Trade Comm'n*, 362 F.3d 1359, 1364 (Fed. Cir. 2004). "Nor should particular embodiments in the specification be read into the claims; the general rule is that the claims of a patent are not limited to the preferred embodiment." *Cornell Univ. v. Hewlett-Packard Co.,* 313 F. Supp. 2d 114, 126 (N.D.N.Y. 2004) (citing, *inter alia*, *Texas Digital Sys., Inc. v. Telegenix, Inc.,* 308 F.3d 1193, 1204 (Fed. Cir. 2002)).

In addition to the ordinary meaning of a claim term itself and the patent's specification, the prosecution history related to the patent in issue can help inform the determination of a proper claim construction. *Phillips*, 415 F.3d at 1317. That history is generally comprised of "the complete record of proceedings before the Patent and Trademark Office [("PTO")], including any express representations made by the applicant regarding the

scope of the claims" and an examination of any relevant prior art. *Vitronics*, 90 F.3d at 1582-83. Such evidence, which typically chronicles the dialogue between the inventor and the PTO leading up to the issuance of a patent, and thus can act as a reliable indicator of any limitations or concessions on the part of the applicant, oftentimes proves highly instructive during claim construction. *See Phillips*, 415 F.3d at 1317 ("[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.").

B. Claim Construction Analysis

In their joint claim construction statement, the parties have identified the following disputed claim terms: [4,5]

[4] The parties have agreed that the terms "vertical," "vertically oriented," "oriented vertically," and "vertically downward" (collectively referred to as the "vertical terms") are sufficiently related such that they should be considered together for purposes of claim construction. Dkt. No. 43 at 1-2.

[5] The term "angled walls" was originally also in dispute. The parties have now agreed, however, that no construction of this term is required. Dkt. No. 38 at 24-27; Dkt. No. 41 at 28. In addition, the parties are also in accord that, if the court finds that the term "angle of deflection" needs construction, it should be defined as "the angle between the vector of debris being received in the hopper and the surface of the angled wall being impacted by the debris." Dkt. No. 32 at 1. Because I believe that a POSITA might not necessarily understand the intended meaning of this term, I recommend that it be construed and that the court adopt the agreed-upon construction.

Term/Phrase	Claims Implicated
vertical deflection component	1, 10, 15
oriented vertically	1
vertically downward	10
vertically oriented	15
pulley	1, 10, 15
horizontal plane	1, 3, 4, 10, 11, 15, 18
vertical	1, 10, 15

The '971 Patent is a relatively straight-forward patent. It is comprised of twenty-two claims, Claims 1, 10, and 15 of which are independent. Because those three independent claims are potentially impacted by the court's claim construction, and to provide context for the claim construction analysis that follows, they are set forth below (with the disputed terms in bold):

> **1**. A [highly resilient] skid steer attachment for a skid steer c comprised of:
> a support frame [supported by at least two support brackets] *having a first end, a second end, a first side, and a second side opposite said first side;*
> a hopper having [four] a *plurality of* angled walls for receiving debris at an angel of deflection which minimizes the impact of debris on a conveyer belt;
> wherein one of said [four] angled walls is **vertical** relative to a **horizontal plane**;
> wherein [three] *a plurality* of said [four] angled walls further include a **vertical deflection component *oriented***

vertically for directing debris downward
a conveyor system comprised of a conveyer belt and a **pulley**, said **pulley** being at least two inches wider than said conveyer belt;
at least one [hydraulic] *power* system for powering said conveyor system;
a spreader system;
a plurality of tandem casters rotatably attached at [a] *said* first end of said support frame, [said plurality of tandem casters comprised of steel polyurethane plastic];
at least one contact roller rotatably attached to said first end of said support frame; and
a universal mounting plate attached at [a] *said* second end of the support frame in a manner that allows said mounting plate to be engaged by a skid steer.

10. A skid steer attachment device comprising: a support frame;
a hopper with a plurality of angled walls, wherein at least one of said plurality of angled walls is **vertical** relative to a **horizontal plane**, and *wherein at least one of said plurality of angled walls* further includes a **vertical deflection component** configured to direct debris ***vertically*** **downward**;
a conveyor system including a conveyer belt [and at least one pulley wherein the at least one pulley is wider than said conveyer belt];
*a **pulley** that is at least 2 inches wider than the conveyer belt and configured to prevent the conveyer belt from moving off an edge of the **pulley**;*
at least one system for powering said conveyor system;
a spreader system comprising a first wall extending at a first angle from the support frame and a second wall extending at a second angle from the first wall;
a plurality of tandem casters rotatably attached at a first end of said support frame;
at least one contact roller rotatably attached to said first end of said support frame configured for engagement with at least one rear wheel of a vehicle; and
a universal mounting plate attached at a second end of the support frame configured for attachment to a skid steer.

15. *A highly resilient skid steer attachment for a skid steer comprised of*
a support frame supported by at least two support brackets

a hopper having four angled walls for receiving debris at an angle of deflection which minimizes the impact of debris on a conveyer belt;
wherein at least one of said four angled walls is ***vertical*** *relative to a* ***horizontal plane****;*
wherein at least two of said four angled walls further include a ***vertical deflection component vertically oriented*** *for directing debris downward;*
a conveyer system comprised of a conveyer belt and a ***pulley****, said* ***pulley*** *being at least two inches wider than said conveyer belt;*
at least one hydraulic system for powering said conveyer system;
a spreader system comprising a first wall extending at a first angle from the support frame and a second wall extending at a second angle from the first wall;
a plurality of casters rotatably attached at a first end of said support frame;
at least one contact roller rotatably attached to said first end of said support frame configured for engagement with at least one rear wheel of a vehicle; and
a universal mounting plate attached at a second end of the support frame in a manner that allows said mounting plate to be engaged by a skid steer.

1. Vertical Deflection Component ("VDC")

Claim 1 of the '971 Patent references "a vertical deflection component *oriented vertically* for directing debris downward[.]" '971 Patent at 5:28-5:29. Claim 10 includes "a vertical deflection component configured to direct *debris vertically* downward[.]" *Id.* at 6:9-6:11. Claim 15 provides for "*a vertical deflection component vertically oriented for directing debris downward*[.]" *Id.* at 6:53-6:54. The parties have requested guidance concerning this term, and have counter-proposed the following constructions:

Claim Term	Road Widener	Finke & Sons
Vertical Deflection Component ("VDC")	No construction necessary. In the alternative, plaintiff proposes, "an element that facilitates movement of debris toward the conveyer belt"	"an element that has only vertical vectors and that does not have any lateral or horizontal vectors"

As the claim terms themselves illuminate, the function of the VDC is to direct debris downward onto the conveyer system. '971 Patent at 5:28-5:29, 6:9-6:11; 6:53-6:54. Amended Figure 1, an exemplary embodiment of the invention, depicts a VDC **18** "which deflects debris from walls **22a, 22b,** and **12d** [sic] vertically onto conveyer belt **35**, rather than laterally, so as not to cause pressure on the conveyer belt **35** leading to misalignment over time." *Id.* at 3:37-3:41.

In support of its position that the VDC must be construed to permit absolute verticality in the drop of debris coming off the angled walls **22a, 22b,** and **22d** without any lateral force being exerted, Finke & Sons argues that, during the course of prosecution of the patent application leading to the issuance of the '971 Patent, the patentee disavowed the possibility of any angular characteristics of the VDC in order to overcome a finding of obviousness or anticipation over United States Patent No. 2007/0201952 (the "'952 Patent"), also issued to Inventor Neumann.

As will be seen, the defendant's argument finds some support in the '971 Patent prosecution history. While the issue of "verticality" does potentially come into play when considering the VDC, it is better addressed when considering the "vertical" terms, which are also disputed by the parties. As the patent examiner noted on July 7, 2017, in one of the exchanges during prosecution of the application leading to reissuance of the '971 Patent, "[i]n the phrase 'vertical deflection component' the word 'vertical' could be an adjective describing the direction that the component deflects the debris, not an actual orientation of the component relative to the belt."[6] Dkt. No. 37-4 at 9. This distinction is supported by the claim terms themselves. For example, Claim 1 calls for inclusion of "a vertical deflection component *oriented vertically* for directing debris downward[.]"

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[6] From the prosecution history, it is readily apparent that the examiner struggled with the concept of the intended purpose of the VDC, noting the following in communication dated March 23, 2016:

> The examiner contends that since the element 18 does not extend laterally inwards from the bottom of the angled walls into the center of the hopper that the member 18 fails to direct the debris down or vertically. Debris contacting the walls would not be influenced by the member 18 as far as the direction it falls relative to the conveyer belt. While member 18 might keep debris from going under and beyond the bottom of the walls after it already gets to the conveyer belt, it is unclear how it deflects debris down or vertically down from the angled walls to the conveyer belt.

Dkt. No. 37-10 at 15.

'971 Patent at 5:27-5:28. Describing the illustrative embodiment, however, the '971 Patent specification refers to the element as a "vertical drop component **18** which deflects debris from walls **22a**, **22b**, and **12d** [sic] vertically onto conveyer belt **35**, rather than laterally[.]" '971 Patent at 3:37-3:39.

Having considered these indicators, I recommend that the term "VDC" be construed as "an element that facilitates movement of debris downward, in a vertical direction, toward the conveyer belt," and that the issue of the proper orientation of the VDC be considered in the next section, which addresses the vertical terms.

2. Vertical Terms

As noted above, Claim 1 provides that the VDC **18** be "*oriented vertically* for directing debris downward[.]" '971 Patent at 5:28-5:29. Similarly, Claim 15 provides for "*a vertical deflection component vertically oriented for directing debris downward*[.]" *Id.* at 6:53-6:54. Claim 10 provides for a VDC "configured to direct debris *vertically* downward." *Id.* at 6:9-6:11. All three of the independent claims (Claims 1, 10, and 15) provide that at least one of the four angled walls of the hopper be "vertical relative to a horizonal plane." '971 Patent at 5:25-5:26, 6:8-6:9, 6:50-6:51. The parties have offered the following constructions for these four terms:

Claim Term	Road Widener	Finke & Sons
oriented vertically	No construction necessary. In the alternative, plaintiff proposes "substantially perpendicular to the horizontal plane"	"positioned at a 90° angle to the surface plane of the conveyor belt"
vertically downward	No construction necessary. In the alternative, plaintiff proposes "toward a conveyer belt on a vector substantially perpendicular to the horizonal plane"	"solely in a downward direction at a 90°angle to the surface plane of the conveyer belt"
vertically oriented	No construction necessary. In the alternative, plaintiff proposes "substantially perpendicular to the horizonal plane"	"positioned at a 90° angle to the surface plane of the conveyer belt"
vertical	No construction necessary. In the alternative, plaintiff proposes "substantially perpendicular to the horizonal plane"	"perpendicular to or having an angle of 90-degrees with respect to the horizontal plane"

As can be seen, as a common theme, the constructions of these terms all turn on whether absolute verticality – meaning 90° relative to the respective point of reference – is required (as Finke & Sons argues), or instead, whether there is room for deviation from 90° (as Road Widener argues), and if so, how much is allowed. This debate, when considering the '971 Patent specification and the prosecution history, presents a conundrum.

To permit deviation and recommend adoption of a construction that

includes, in substance, the concept of "substantial verticality" arguably runs counter to the patentee's position that was consistently advanced throughout the prosecution history, to the effect that the VDC should not be oriented in such a way as to deflect debris laterally, but instead should permit freefall through application of only vertical force, without the exertion of any lateral force. As will be seen, however, to require absolute 90° verticality would be inconsistent with dependent Claim 3 and the illustrative embodiment depicted in Amended Figure 1. These two conflicting points of view are more fully articulated below.

a. The Case for Absolute Verticality

The common understanding of the term "vertical" connotes something that is upright, perpendicular, or at a right angle from a horizontal plane or primary axis.[7] While Road Widener now espouses a definition which admits of some modicum of deviation from the absolute verticality, nowhere in the claim terms themselves is there indication that this was intended.

[7] *See, e.g.,* Merriam Webster, "vertical," https://www.merriam-webster.com/dictionary/vertical (last visited Apr. 26, 2021) ("1a: perpendicular to the plane of the horizon or to a primary axis: UPRIGHT"); Oxford English Dictionary, "vertical," https://www.oed.com/view/Entry/222776?redirectedFrom=vertical#eid (last visited Apr. 26, 2021) ("A.3. Placed or extending at right angles to the plane of the horizon; perpendicular; upright.").

Many patents inject moderation into otherwise rigid specifications by including terms of degree, like "about," "approximately," or "substantially." Indeed, the '971 Patent specification allows for the use of terms "substantially" or "approximately" in certain contexts, and states that these terms, "as used [in the specification] may be applied to modify any quantitative representation that could permissibly vary without resulting in a change to the basic function to which it is related." '971 Patent at 2:62-2:64. I note, moreover, that, within the '971 Patent specification, wall **22c** of the Amended Figure 1 exemplary embodiment is described as "substantially vertical relative to conveyer belt **35** (at an *approximate* 90 degree angle)[.]" *Id.* at 3:30-3:32 (emphasis added). Thus, the patentee has demonstrated that he was capable of crafting language to permit such modest deviations.

The fact that mitigating terms such as "substantially" or "approximately" were not used by the patentee in conjunction with the "vertical" terms suggests that the patentee intended absolute verticality in connection with the terms. This is consistent with the understanding of the patent examiner, who, at one point, interpreted the term "positioned vertically" as being "at a 90° angle to the conveyer belt." Dkt. No. 37-4 at

9.[8]

The prosecution history includes several exchanges that shed some light on this issue. In particular, the examiner's early objections to the patentee's reissuance application related to the written description requirements of 35 U.S.C. § 112 and his findings of obviousness/anticipation under 35 U.S.C. §§ 102 and 103. In addressing these concerns, the patentee and examiner focused on an earlier patent, the '952 Patent (also issued to Inventor Neumann), and specifically upon a flange extending from the bottom of the hopper's angled walls as seen in Figure 4 of the '952 Patent, constituting a VDC.[9]

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[8] The prosecution history excerpts relied upon by the court appear in the record in several instances, including in the exhibits submitted at the time of the hearing by Road Widener. For ease of reference, I have cited to the prosecution history excerpts contained within Finke & Sons' exhibits, which have been docketed.

[9] Figure 4 of the '952 Patent is set forth below. The flange of the '952 Patent that is discussed by the patentee and the examiner during reissuance has been circled by the court.

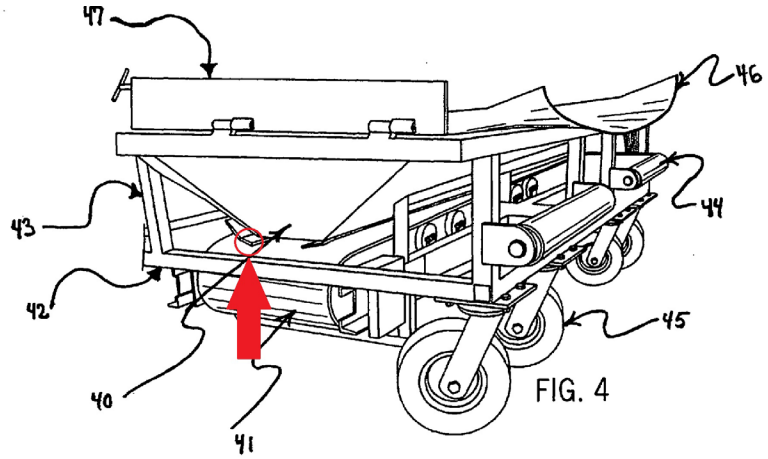

FIG. 4

To overcome any claims of obviousness or anticipation, in a filing dated June 23, 2016, the applicant attempted to distance himself from the '952 Patent by focusing on the flange extending from the bottom of the hopper's angled walls, as seen in Figure 4 of the '952 Patent. Dkt. No. 37-9 at 11-14. The patentee described the flange as "direct[ing] debris laterally inward not vertically downward." Dkt. No. 37-9 at 12. For this reason, the applicant claimed, the present invention was neither obvious nor anticipated by the '952 Patent because the VDC of the '971 Patent "direct[s] debris downwardly." *Id.* Furthermore, the patentee subsequently filed a submission dated December 7, 2016, that included declarations given by Devin Wolf, the President of Road Widener, LLC, and Inventor Neumann, pointing out that the flange in the '952 Patent extends laterally, not vertically, thereby deflecting debris laterally onto the conveyer belt and leading to the undesirable phenomenon of misalignment of the conveyer belt over time due to pressure build-up. Dkt. No. 37-7 at 21-24. In his declaration, Inventor Neumann stated that,

> [b]y extending laterally, the flange of Neumann-'952 deflects the debris laterally onto to the conveyer belt[, which] can cause misalignment of the conveyer belt over time due to pressure buildup on the conveyer belt. By having the inventive vertical deflection component of the present invention, the debris is allowed to fall downward

> without being deflected inward, thus preventing pressure buildup on the conveyer belt.

Id. at 21; *see also id.* at 23.[10]

The examiner's objections under 35 U.S.C. § 112 were based, in part, upon his belief that the specification lacked a written description of the manner in which the VDC would deflect debris downward. Dkt. No. 37-10 at 14-15. Indeed, prior to March 7, 2017, the proposed independent Claims 1 and 15 did not contain language specifying the orientation of the VDC. *See, e.g.* Dkt. No. 37-17 at 3, 6; Dkt. No. 37-19 at 3, 6. On that date, however, those claims were amended to clarify that the VDCs were vertically oriented. *See* Dkt. No. 37-5 at 3, 6. The patentee noted as follows:

> The [VDC] works to direct debris downward or vertically downward by applying a force that counteracts the lateral force of the aggregate spread, resulting in *only* vertical forces being applied to the aggregate. That is, the vertical deflection component provides a lateral force equal to the lateral force of the aggregate attempting to spread laterally. As a result, the resultant forces on the aggregate *only* contain a vertical component, which results in the aggregate being moved

[10] Devin Wolf's declaration contains an identical explanation of the difference between the '952 Patent's flange and the VDC disclosed in the '971 Patent, except that Wolf's declaration contains an obvious typographical error. Dkt. No. 37-7 at 23 (stating that "the debris [in the '971 Patent] is allowed to fall downward *with* being deflected inward").

> downward or vertically downward due to forces applied by the vertical deflection component.

Id. at 10 (emphasis added).

In his response, issued on July 7, 2017, in light of the amendments to Claims 1 and 15, the examiner noted that, although the term "vertical" in the phrase VDC "could be an adjective describing the direction that the component deflects the debris, not an actual orientation of the component relative to the belt," the amendments now "include[d] a positive recitation that the component is oriented vertically; and claim 10 requires that the VDC deflect debris vertically downward." Dkt. No. 37-4 at 9. The examiner therefore withdrew his rejection under 35 U.S.C. § 112, and explained that "since the VDC prevents lateral spreading out of the debris[,] . . . when the debris meets the VDC the only force acting on the debris is gravity directing the debris vertically downward onto the conveyer belt." *Id.* at 8. The examiner concluded by agreeing "that Neumann-'952 fails to teach a VDC which itself is positioned vertically (at a 90° angle to the conveyer belt), or which is capable of deflecting debris vertically downward." *Id.* at 9.

Based upon this exchange, it appears that critical to allowance of the application was that the VDC does not apply lateral force to debris as it falls from the angled walls **22a, 22b,** and **22d**. This appears to be entirely

consistent with the portions of the VDC **18** depicted in Amended Figure 1, at least with respect to the portions of the VDC that are parallel to the conveyer belt. It is also consistent with the '971 Patent specification, which describes the VDC depicted in Amended Figure 1 as a component "which deflects debris from walls **22a**, **22b**, and **12d** [sic] vertically onto conveyer belt **35**, rather than laterally[.]" '971 Patent at 3:37-3:39.

As a matter of simple physics, regardless of the severity of the angle, any angle of the VDC greater than 90° relative to the conveyer belt will, necessarily, exert some modicum of lateral force on any debris that strikes it, thereby deflecting it laterally. In considering the exchanges during patent prosecution, is it clear that the patentee disavowed a VDC that would be oriented in such a way as to exert lateral force. *See, e.g.,* Dkt. No. 37-7 at 21-24. This is consistent with the understanding of the examiner at the time he withdrew his objections. *See* Dkt. No. 37-4 at 8-9.

Accordingly, based on the patent's prosecution history, Finke & sons' argument claiming that the patentee disavowed any possibility of angularity in the vertical terms appears somewhat meritorious.

b. The Case Against Absolute Verticality

As was previewed earlier, if the court were to conclude that the VDC must be 90° relative to the conveyer belt, it would lead to the troublesome

result of excluding a dependent claim and exemplary embodiment set forth in the patent specification. Claim 1 of the '971 Patent teaches

> a hopper having . . . *a plurality of* angled walls for receiving debris at an angle of deflection which minimizes the impact of debris on a conveyer belt; wherein one of said . . . angled walls is vertical relative to a horizontal plane[.]

'971 Patent at 5:22-5:26. Claim 3, which is dependent upon Claim 1, provides that "said angled walls have . . . *different* slopes *ranging from 100 to 170 degrees as measured from a point on a horizontal plane*." *Id.* at 5:42-5:49. To adopt a requirement of absolute verticality with respect to at least one of the angled walls would effectively write Claim 3 out of the patent. There is a strong presumption against construing a term which eliminates a claim. *See, e.g., Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1346 (Fed. Cir. 2020) (rejecting the district court's construction of a claim term "which renders dependent claims invalid"); *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998).

The requirement of absolute verticality is also inconsistent with the patent specification, and specifically the illustrative embodiment reflected in Amended Figure 1. While the VDCs **18** running parallel to the conveyer belt appear to be vertical, the VDC **18** that is at right angles to the conveyer belt and immediately beneath angled wall **22a** appears to be

angled from top to bottom, and thus is potentially capable of exerting a lateral force on debris coming off of the respective angled wall **22a**. A requirement of the absolute verticality would eliminate the illustrative embodiment reflected in Amended Figure 1 in violation of the strong presumption that a claim term construction which eliminates a depicted embodiment cannot be correct. *See SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1378 (Fed. Cir. 2013) ("A claim construction that excludes the preferred embodiment is rarely, if ever, correct."). If the "vertical" terms were construed to admit of some angularity, Claim 3 and Amended Figure 1 of the '971 Patent would be salvaged. Moreover, such a construction is consistent with the '971 Patent specification, which provides that, "[i]n an exemplary embodiment, wall **22c** is *substantially* vertical relative to the conveyer belt **35** (at an approximate 90 degree angle)[.]" '971 Patent at 3:30-3:32 (emphasis added).

c. The Court's Construction

From the foregoing, it is clear that the court must choose between two flawed approaches that present distinct problems. To adopt Road Widener's construction risks ignoring the patent's prosecution history – particularly the patentee's attempt to distance himself from the '952 Patent's flange that exerted lateral force upon debris. To adopt Finke &

Sons' recommended construction of the "vertical" terms, however, would result in eliminating Claim 3 and Amended Figure 1, an exemplary embodiment. In addition, adopting Finke & Sons' construction would also require the court to conclude that the patentee disavowed any degree of angularity to the VDC *other* than perfectly 90°. As discussed above, the standard for finding disavowal is exacting, and, in my view, the exchanges between the patentee and the examiner do not meet this standard.

Accordingly, selecting the lesser flawed of the two competing positions, I propose the following constructions for the "vertical" terms:

Claim Term	Construction
oriented vertically	substantially perpendicular to the horizontal plane
vertically downward	toward the conveyer belt on a vector substantially perpendicular to the horizontal plane
vertically oriented	substantially perpendicular to the horizontal plane
vertical	substantially perpendicular to the horizontal plane

As explained above, these constructions are consistent with the specification, which provides in the exemplary embodiment that the wall **22c** "is *substantially* vertical relative to conveyer belt **35** (at an *approximate* 90 degree angle)[.]" '971 Patent at 3:30-3:32 (emphasis

added).[11] Such a construction also is supported by the portion of the '971 Patent specification that describes walls **22a**, **22b**, **22c** and **22d** as being *angled inward*. '971 Patent at 3:17-3:18. The only way to reconcile this portion of the specification with the three independent claims of the '971 Patent, all of which provide that one of the four angled walls must be vertical relative to a horizontal plane, is to add the modifier "substantially" to vertical and to eschew a requirement of absolute verticality.

3. Pulley[12]

Independent Claims 1, 10, and 15 of the '971 Patent all reference a conveyer belt and pulley. '971 Patent at 5:31-5:32, 6:15-6:18, 6:55-6:58. In each of those claims the pulley is specified to be at least two inches wider

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[11] I admit some temptation to set a limit on the degree of angularity to associate with the vertical terms. One such limit, for example, could be 100°, stemming from dependent Claim 3 because it describes the minimal permissible angle for the angled walls, one of which must be "vertical" according independent Claim 1. The Federal Circuit has, on occasion, approved of such extrapolation in order to affix a definitive range to a limitation. *See, e.g., Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd.*, 476 F.3d 1321, 1326-28 (Fed. Cir. 2007). The clear weight of Federal Circuit authority, however, counsels against such precision being read into a patent. *See, e.g., Modine Mfg. Co. v. USITC*, 75 F.3d 1545, 1551 (Fed. Cir. 1996) ("Ordinarily a claim element that is claimed in general descriptive words, when a numerical range appears in the specification and in other claims, is not limited to the numbers in the specification or the other claims.").

[12] Finke & Sons objects to Slide 15 of Road Widener's hearing presentation, which appears to depict a portion of the accused device, arguing that claim construction should not be conducted in the context of, but instead independent of, any accused device. *See, e.g., Pall Corp. v. Hemasure Inc.*, 181 F.3d 1305, 1308 (Fed. Cir. 1999). I agree and have not considered the accused device when construing the term "pulley."

than the conveyer belt. *Id.* The parties have proposed the following constructions for this term:

Claim Term	Road Widener	Finke & Sons
Pulley	No construction necessary. In the alternative, plaintiff proposes a "rotational device for transferring power to a belt"	"a roller having a cylindrical shape and structure that allows the conveyer belt to travel or 'walk' along its surface from side to side, in a direction perpendicular to its rotational direction"

Neither the prosecution history associated with the '971 Patent nor the patent specification itself provides a great deal of guidance concerning the definition of "pulley." The focus of both was upon insuring that the pulley was sufficiently wide in relation to the conveyer belt to prevent the belt from moving off the edge of the pulley.

A pulley is a simple device taught in elementary science classes as one of the most basic of mechanical devices. There are varied definitions of the term "pulley" of which, presumably, a POSITA would be aware. For example, one of the definitions posited for the term pulley by the Oxford English Dictionary describes it as follows:

> a wheel or drum fixed on a shaft and turned by a belt, cable, etc., for the application or transmission of power, or to guide the belt.

Pulley (1.c), Oxford English Dictionary (3d ed. 2007). Another accepted

definition for the term is as follows:

> [A] wheel driven by or driving a belt or the like, used to deliver force to a machine, another belt, etc., at a certain speed or torque.

Pulley (3), https://www.dictionary.com-browse-pulley (last visited Apr. 17, 2021).

The pulley **16** specified in the illustrative embodiment is not visible in Amended Figure 1 because it is concealed in that figure by a guard **17**, but is partially visible in Amended Figures 2b and 3, shown below. '971 Patent at 3:45-3:47.

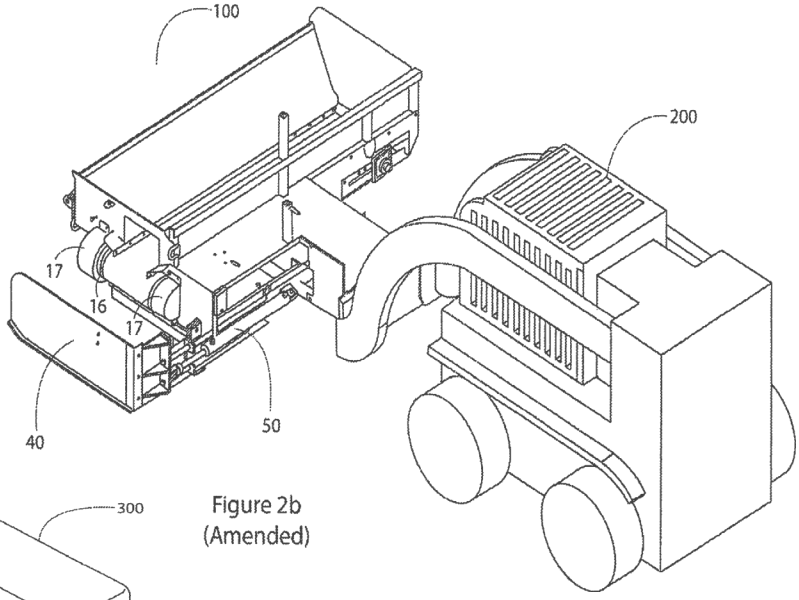

Figure 2b
(Amended)

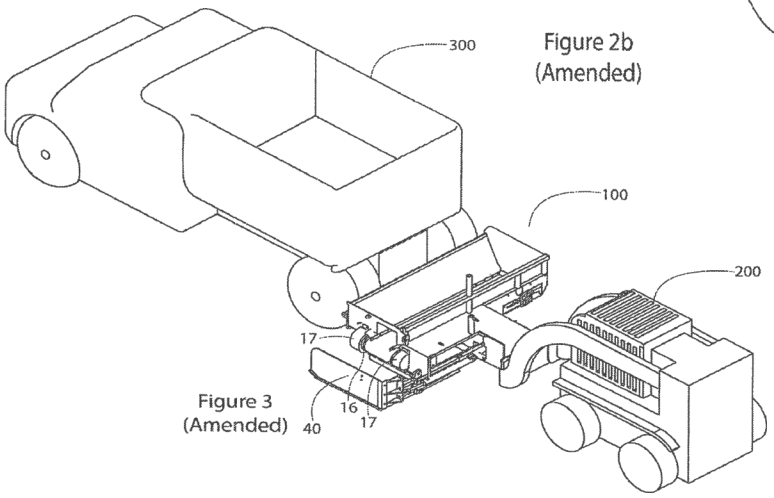

Figure 3
(Amended)

Those figures, which depict different views of an exemplary embodiment of the '971 Patent invention, both disclose a pulley **16** that is cylindrical in shape, shown as a round, roller-type device over which the skid steer's conveyer belt **35** travels. This fact seemingly would lend support to the construction of the term "pulley" proposed by Finke & Sons. It would normally be improper, however, to cabin a claim term by reference to a single embodiment absent a clear intent on the part of the patentee to so limit the construction of that term without admitting of other potential figurations. *See Williamson v. Citrix Online, Inc.*, 792 F.3d 1339, 1346-1347 (Fed. Cir. 2015) ("This Court has repeatedly cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification." (internal quotation marks omitted)).

Road Widener does not specifically argue that the pulley in the '971 is *not* round.[13] And, a round object that extends for any distance – in this case, at least two inches wider than the conveyer belt – is by definition a cylinder.

During prosecution, the patent applicant attempted to distinguish his invention from the prior art, which "does not disclose a pulley that is wider

[13] As noted above, Road Widener proposes to define the term "pulley" as "a rotational device." Dkt. No. 32 at 10.

than the conveyer belt, as required by each amended independent claim." Dkt. No. 37-15 at 12. Additionally, as noted above, in each of the three independent claims of the '971 Patent, the pulley is described as being at least two inches wider than the conveyer belt. This evidence strongly suggests that the pulley referenced in the '971 Patent claims is cylindrical in nature. Accordingly, I agree with Finke & Sons to the extent that a POSITA would understand that, in light of the claim language, specification, and prosecution history, the pulley in the '971 Patent is round or cylindrical.

I do not agree, however, that the intrinsic evidence supports Finke & Sons' further limitation of the term that would mandate that the pulley disclosed specifically "allows the conveyer belt to travel or 'walk' along its surface." The '971 Patent specification suggests that the requirement that the pulley **16** be at least two inches wider than the conveyer belt is intended to prevent the belt from moving laterally off the edge of the pulley, thereby resulting in malfunction. '971 Patent at 3:42-3:48. While the design of the pulley depicted in Amended Figure 1 *could* result in movement of the belt **35** vis-a-vis the pulley **16**, and the inventor's intent in widening the pulley was to prevent failure in the event of lateral belt movement, there is no support for the contention that the pulley *must* allow

the conveyer belt to travel from side-to-side on its surface. I therefore recommend against adoption of this additional limitation.

Based on the foregoing, I recommend that the term "pulley" be construed as "a roller having a cylindrical shape and structure which is fixed on a shaft and permits the application or transmission of power to a belt."

4. Horizontal Plane

Claims 1, 3, 4, 10, 11, 15, and 18 include "horizontal plane" as a frame of reference for configuration of the hopper walls. The parties have counter-proposed the following claim constructions for this term:

Claim Term	Road Widener	Finke & Sons
Horizontal Plane	No construction necessary. In the alternative, plaintiff proposes a "a plane defined by the horizontal axis of the three dimensional space of the skid steer attachment"	"a plane inside the hopper that is parallel to the surface of the conveyer belt"

In its opening claim construction brief, Finke & Sons asserts that "the relevant horizontal plane is one defined by the horizontal plane of the hopper." Dkt. No. 36 at 23. This position appears to be well supported by the specification and claim terms themselves. Finke & Sons goes on, however, to qualify that position further by arguing that the conveyer belt

should be utilized as a frame of reference. Finke & Sons cites the portion of the specification that describes wall **22c** as "substantially vertical relative to conveyer belt **35** (in an approximate 90 degree angle)." '971 Patent at 3:30-3:33. Such a construction, however, would effectively eliminate the possibility of a conveyer belt that is positioned at an angle relative to the hopper, with one end being higher than the other. There is no support for eliminating such a potential configuration from the '971 Patent invention. If the proper frame of reference for purposes of the term "horizontal plane" is the plane of the hopper, rather than the conveyer belt, then the requirement that the wall **22c** be vertical, as required in the independent Claims 1, 10, and 15, would be satisfied even if the conveyer belt is angled. I therefore recommend that the term "horizontal plane" be construed as "a plane defined by the horizontal axis of the hopper."

IV. SUMMARY AND RECOMMENDATION

Based upon the parties' oral and written presentations, and having carefully considered the available intrinsic evidence, and to the extent necessary, extrinsic evidence, it is hereby respectfully

RECOMMENDED that the court affix the following meaning to the following patent claim terms:

Term/Phrase	Construction
vertical deflection component	an element that facilitates movement of debris downward, in a vertical direction, toward the conveyer belt
oriented vertically	substantially perpendicular to the horizontal plane
vertically downward	toward the conveyer belt on a vector substantially perpendicular to the horizontal plane
vertically oriented	substantially perpendicular to the horizontal plane
pulley	a roller having a cylindrical shape and structure which is fixed on a shaft and permits the application or transmission of power to a belt
horizontal plane	a plane defined by the horizontal axis of the hopper
vertical	substantially perpendicular to the horizontal plane
angled walls	the angle between the vector of debris being received in the hopper and the surface of the angled wall being impacted by the debris
angle of deflection	the angle between the vector of debris being received in the hopper and the surface of the angled wall being impacted by the debris being impacted by the debris

NOTICE: Pursuant to 28 U.S.C. § 636(b)(1), the parties may lodge written objections to the foregoing report. Such objections must be filed with the clerk of the court within FOURTEEN days of service of this report. FAILURE TO SO OBJECT TO THIS REPORT WILL PRECLUDE

APPELLATE REVIEW. 28 U.S.C. § 636(b)(1); Fed. R. Civ. P. 6(a), 6(d), 72; *Roldan v. Racette*, 984 F.2d 85 (2d Cir. 1993).

It is hereby ORDERED that the clerk of the court serve a copy of this report and recommendation upon the parties in accordance with this court's local rules.

Dated: May 13, 2021
Syracuse, NY

David E. Peebles
U.S. Magistrate Judge