

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
WESTERN DIVISION**

MERIDIAN MANUFACTURING,
INC.,

Plaintiffs,

vs.

C&B MANUFACTURING, INC. d/b/a
HITCHDOC,

Defendant.

No. C15-4238-LTS

**MEMORANDUM OPINION AND
ORDER REGARDING
CONSTRUCTION OF DISPUTED
PATENT CLAIM TERMS**

I. INTRODUCTION

This action is before me for submission to the parties of a ruling on patent claims construction after a *Markman* hearing.¹ Plaintiff Meridian Manufacturing, Inc. (Meridian), holds United States Patent No. 6,964,551 B1 ('551 patent) which, as will be discussed, involves component claims for an agricultural trailer. In its complaint, Meridian alleges that defendant C&B Manufacturing, Inc. (HitchDoc), is a competitor that also makes agricultural equipment, including trailers that infringe on the '551 patent. The parties dispute the construction of certain claims contained in the '551 patent.

II. HISTORY

A. Procedural History

Meridian filed its complaint (Doc. No. 2) on November 23, 2015. On June 3, 2016, the parties presented a technical tutorial on the background of the technology at

¹ See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

issue in the case. See Doc. No. 19. The parties filed a joint claim construction statement on October 17, 2016. Doc. No. 24. On November 1, 2016, both parties filed their claim construction briefs. Doc. Nos. 30, 31. Both parties then filed rebuttals, Doc. Nos. 35 and 37, and Meridian filed a supplement. Doc. No. 41. The parties appeared for a *Markman* hearing on January 11, 2017.

B. History of the ‘551 Patent

As the parties, or at least their attorneys, are well aware, *Markman* hearings often descend into competitions to confound the court with technical terminology.² Fortunately, this case involves a relatively simple patent – for an agricultural trailer – and primarily concerns only claims related to the mechanism by which a seed box is put on and attached to the trailer.

A brief bit of context is necessary to explain the issues in this case. Farmers use planters, large pieces of equipment often attached to tractors, to plant seeds in their fields. Tractors drag the planters through fields and the planters deposit individual seed quantities into the ground at the appropriate locations. Before that can happen, the seeds, which come from large agri-businesses, must make their way from the agri-business to the farm and then into the planters. The agri-businesses deliver seeds to farms in large boxes, which cannot be maneuvered without mechanical assistance. A farmer must use

² See Richard H. Abramson, *Presenting Technologically Complex Cases to Lay Judges and Juries*, 14 *Hastings Comm. & Ent L.J.* 259, 262 (1992) (comment):

There is another phenomenon at work as well. Having mastered the technology—or at least the jargon—a perverse and self-destructive impulse, known in the Latin as *ego technologus idiotis*, sweeps over the advocate. Caught in its grip, counsel succumbs to the urge to show off his technical wizardry and jargon, and technobabble dances lightly off his tongue.

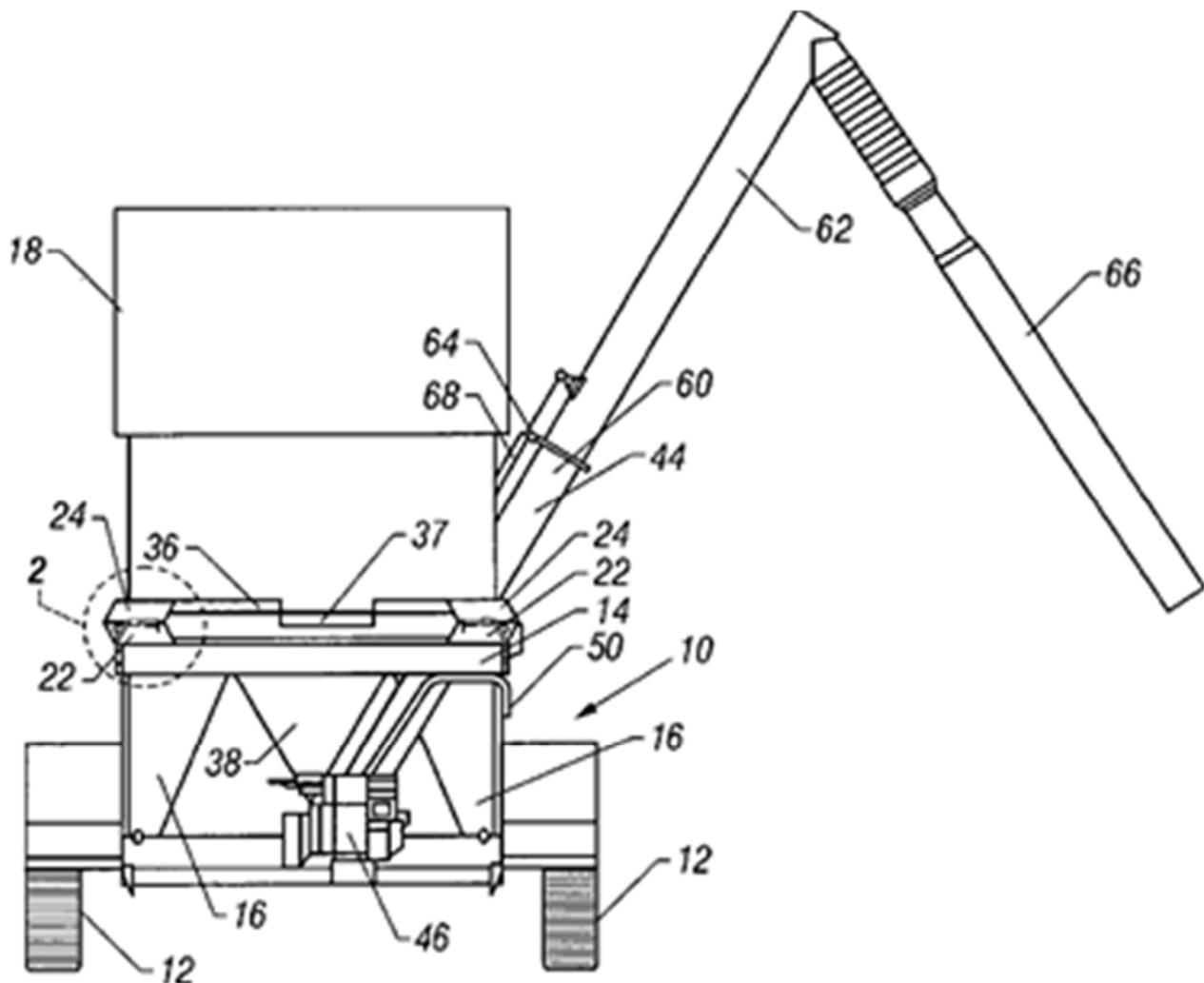
a forklift to load the boxes onto a trailer and drive the trailer to the planter. The farmer then uses a motorized mechanism (such as an auger), attached to the trailer, to remove the seeds from the boxes and deposit them into the planter. The '551 patent discloses a trailer that transports seed boxes to the planter and transfers the seeds into that planter.

As described in the abstract:

An improved trailer for transporting bulk seed boxes is provided. The trailer includes a bed, a hopper extending below the bed for receiving seed from the bulk seed box, and an auger for unloading seed from the hopper. The bed includes upwardly and outwardly extending guide plates to provide self-centering of the seed box when the box is loaded onto the bed with a forklift truck. The bed includes lock bars moveable between locked and unlocked positions to secure the seed box to the bed. The hopper includes a slide gate with a control arm connected to the gate and extending to the auger side of the trailer for moving the slide gate between open and closed position. The auger includes a foldable upper section which is pivotal between a folded transport position and an extended raised operative position. The folding of the upper auger section is facilitated by a gas cylinder and a lever arm.

Doc. No. 30-2 at 1.³ Or, as illustrated in the patent:

³ Meridian alternately refers to the trailer as a seed tender.



Doc. No. 2-1 at 1.

In describing the claims of the '551 patent that are in dispute, Meridian states:

The [551 Patent has nineteen claims, of which only claims 1, 2, 3, 9, 10 and 11 are at issue. These claims are . . . :

1. An improved trailer for transporting a bulk seed box, the box having first and second sidewalls, a bottom, a top, and a flange extending along the sidewalls adjacent the bottom of the box, the trailer comprising:

a wheeled bed for supporting a bulk seed box, the bed having a perimeter edge;

a hopper extending below the bed for receiving seed from the bulk seed box;

a conveyor operatively connected to the hopper for unloading seed from the hopper; and

the bed having guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed.

2. The improved trailer of claim 1 wherein the bed has four corners and the guide plates are located at the corners of the bed.

3. The improved trailer of claim 1 further comprising lock bars on the bed to overlappingly engage the flange of the seed box to secure the seed box to the bed.

9. The improved trailer of claim 1 wherein the conveyor is an auger including a first inner section and a second outer section pivotally attached to the first section for movement between transport and discharge positions, and including a gas cylinder to facilitate movement of the second section between the transport and discharge positions.

10. The improved trailer of claim 1 wherein each guide plate extends outwardly at an obtuse angle from the bed.

11. The improved trailer of claim 1 wherein the guide plates define an enlarged box entrance sloping downwardly and inwardly toward the bed so that the box will automatically center on the bed when loaded onto the bed.

Doc. No. 31 at 7-8. HitchDoc agrees these are the disputed claims. In addition, the parties generally agree on the patent history, although they disagree about what it means. Accordingly, I will highlight only the history relevant to the disputed claims.

The original patent application (submitted by patentee Garry Friesen) was rejected on August 20, 2002, by Examiner James Keenan. Doc. No. 31-2. Relevant to this order,

Keenan rejected the '551 patent because of a prior patent, Patent No. 6,092,974 (the Roth patent). Keenan stated:

Roth shows a trailer for bulk seed containers including wheeled bed 12, hopper 64, conveyor 60, and guide plates 52 which extend “upwardly and outwardly”, as broadly claimed. Although the containers are not disclosed as having a flange, it is noted that the container structure is not a positively claimed limitation. Since the trailer could be used, without modification, for flanged containers, it is considered to meet all claim limitations. . . Claims 3 and 6 are rejected under 35 U.S. C. 103(a) as being unpatentable over Roth in view of Ehlers. . .

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth in view of Ehlers.

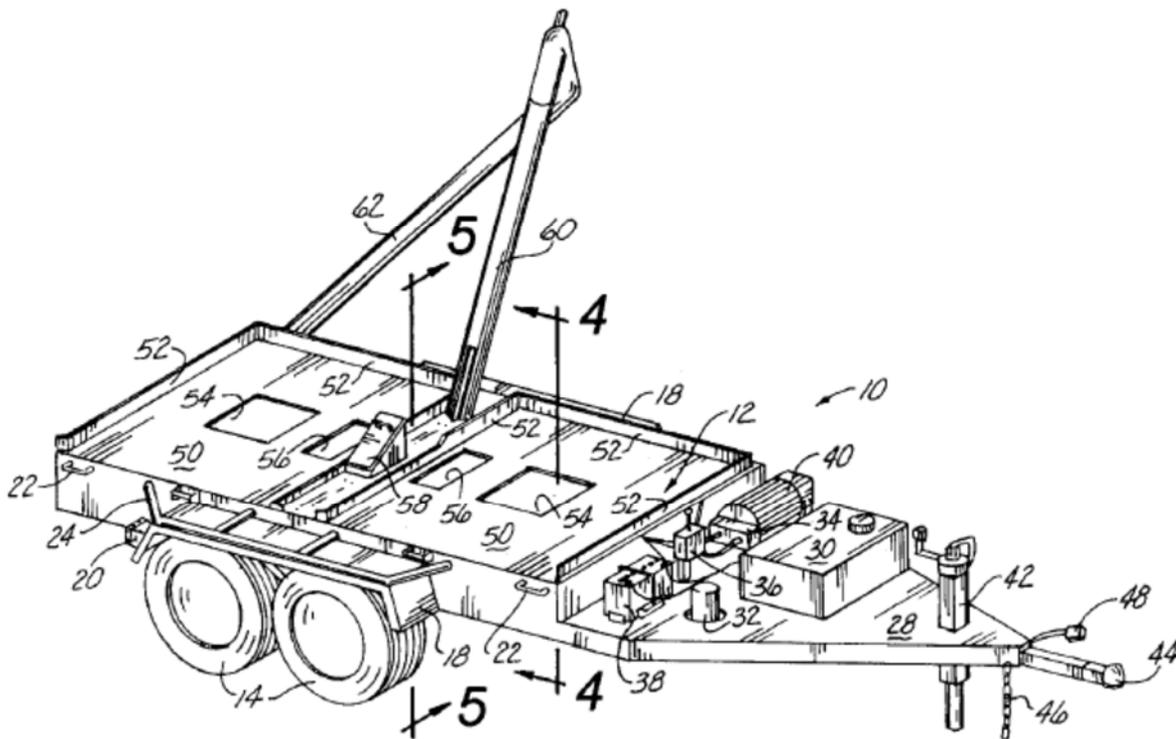
Roth does not show lock bars for engaging flanges on the boxes. It would have been obvious for one of ordinary skill in the art at the time of the invention to have added lock bars to engage flanges on the boxes, as shown by Ehlers, as this would provide a more secure engagement of the boxes for travel over rough terrain.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehlers in view of Titcombe (US 3,868,083).

Ehlers does not show the lock bars to be pivotally mounted, although the rear bar 40 is movably mounted. Titcombe shows pivotally mounted bars for lockingly engaging a flange of a container on a trailer as it is being pulled across a field. It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Ehlers by pivotally mounting the lock bars for movement between locking and unlocking positions, as shown by Titcombe, as this would accord a more convenient means of securing the boxes on the vehicle.

Doc. No. 31-2 at 4, 6-8. Keenan went on to reject several more claims (4, 5, 7, and 14-17) because of the Roth patent's claims related to lock bars and guide plates. *Id.* at 8-10.

The Roth patent discloses a similar type of agricultural trailer. It claims that “[t]he top of the trailer bed 12 has two square bulk container decks 50 that are positioned end to end, and are the mirror images of each other. Each container deck 50 includes a retainer lip 52 that extends up from three sides of each deck 50 leaving the right side open to receive a bulk container 100.” Doc. No. 30-15 at 5. See below:



Id. at 2.

Following the first rejection, Friesen amended his patent claims. Doc. No. 31-3. As explained in the amendment:

Claim 1 as filed provided that the guide plates extended “upwardly and outwardly” to facilitate centering of the box on the bed. The Examiner asserts that the Roth plates 52 meet this limitation, as do the Kruse plates 64. Both the Roth plates 52 and the Kruse plates 64 extend straight upwardly, and not outwardly. To further clarify “outwardly,” Applicant

has amended claim 1 to provide that the guide plates are “inclining upwardly and outwardly from the bed.” The Roth plates 52 and Kruse plates 64 clearly do not incline outwardly from the bed, as required by claim 1. Therefore, claim 1 distinguishes over the cited references so as to be in proper form for allowance. . .

New claims 26-28 also depend from claim 1 and should be allowable as depending from an allowable base claim. Furthermore, claim 26 provides that each guide plate has “a lower edge connected to the perimeter edge of the bed and an upper edge spaced upwardly and outwardly from the perimeter edge.” The plates 52 of Roth and 64 of Kruse do not have an upper edge spaced upwardly and outwardly from the perimeter edge. Therefore, claim 26 further distinguishes over the cited references so as to be allowable.

Claim 27 provides that each guide plate extends “outwardly at an obtuse angle from the bed.” The Roth plates 52 and Kruse plates 64 extend perpendicular to the bed, and therefore do not meet the limitation of claim 27. Therefore, claim 27 further distinguishes over the cited references so as to be allowable.

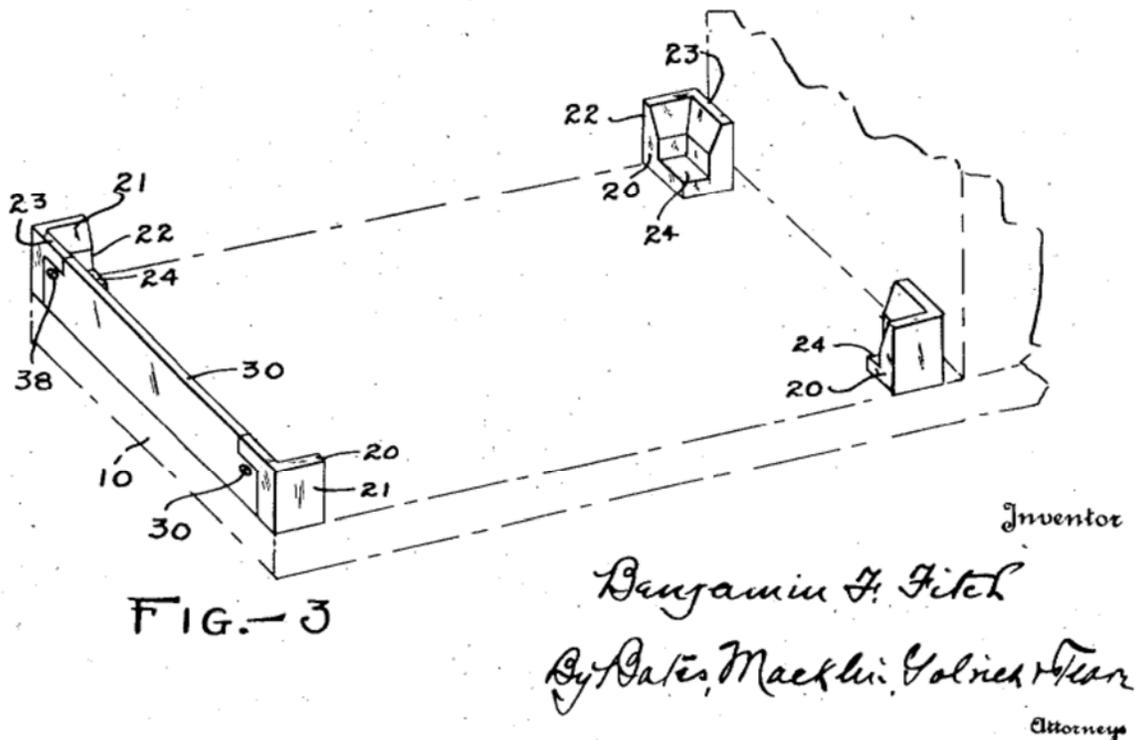
Claim 28 provides that the guide plates “define an enlarged box entrance sloping downwardly and inwardly toward the bed so that the box atomically centers on the bed when loaded onto the bed.” This is best seen in Figures 2 and 3, wherein the guide plate 22A slopes downwardly and inwardly toward the bed 14. The plates of Roth and Kruse do not slope downwardly and inwardly towards the bed, and thus do not satisfy the limitations of claim 28. Therefore, claim 28 distinguishes over the cited references so as to be allowable.

Id. at 7-8. Friesen also amended claim 10, adding the words:

each lock bar being pivotally connected to the bed for movement between an unlocked position spaced outwardly from the perimeter edge of the bed and locked position spaced inwardly from the perimeter edge of the bed.

Id. at 4.

The application was again rejected, this time, in relevant part, because both of the Roth patent and Patent No. 1,675,701 (the Fitch Patent). Doc. No. 31-4. The Fitch Patent, from 1925, is titled simply "Freight Truck." Doc. No. 30-16 at 2. In relevant part, the corners of the bed were visually described:



Doc. No. 30-16 at 2. The Fitch patent stated:

A preferred apparatus for carrying out my invention is illustrated in the drawings, wherein Fig. 1 is a side elevation of a truck, having a removable body thereon; Fig 2 is a rear elevation of the truck shown in Fig. 1; Fig. 3 is a perspective diagrammatic view of a truck with the body removed therefrom and showing a locking bolster which operates in accordance with my invention. . . . To position the container on the truck while allowing it to be readily placed or removed, I provide four corner brackets, two of which 20-20 are located just behind the cab of the truck, and the other two of which 21-21 are adjacent the rear end. Each of these

brackets has a side wall 22 and an end wall 23, and a bottom or floor portion 24 which forms a supporting seat for the body. As shown, the side walls and end walls of the brackets are inwardly beveled from their upward edges to enable the body to be readily centered as it is put into position.

Id. at 5. In rejecting Friesen's amendment, Keenan stated:

Roth shows a trailer for bulk seed containers including wheeled bed 12, hopper 64, conveyor 60, and guide plates 52 which extend upwardly from the bed. Although the containers are not disclosed as having a flange, it is noted that the container structure is not a positively claimed limitation. Since the trailer could be used, without modification, for flanged containers, it is considered to meet this claim limitation.

Roth does not, however, show the guide plates to incline outwardly from the bed.

Fitch shows a load bed of a vehicle wherein guide plates 20-21 have inner surfaces which incline upwardly and outwardly from the bed to enable a load to be "readily centered as it is put into position" on the bed (page 1, line 90).

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Roth by utilizing guide plates which inclined outwardly, as shown by Fitch, as this would make loading easier by compensating for some misalignment as the load is lowered onto the bed.

Doc. No. 31-4 at 3. Keenan rejected the claims related to lock bars for the same reasons set out in the first rejection. Doc. No. 31-4 at 5-8.

Friesen filed an appeal, stating:

Applicant's claim 1 requires "guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed". These guide plates are much different than those shown in Roth, Fitch or Kruse. In the Final Office Action, the Examiner acknowledged the Applicant's specific claim language of "guide plates inclining upwardly and outwardly" are not shown by Roth and Kruse (see Final Action, pages 2 and 3). Moreover, in the Final Office Action, the

Examiner characterized the teaching of Fitch to be a bracket having inner surfaces which incline upwardly and outwardly from the bed (Final Office Action, page 2). It is clear in Figure 5 of Fitch that the brackets do not extend beyond the perimeter of the bed, as required by claim 1.

However, in his Answer, the Examiner has now changed his analysis of Fitch from that which is clearly shown in Fitch to a broader “concept” of an “outwardly angled bracket to position and center the container on the bed” (Answer, page 4). This is an overly broad mischaracterization of the teaching of Fitch, and is impermissible hindsight by the Examiner. All Fitch teaches is a bracket at the perimeter edge of the bed with an inwardly sloping surface. Nowhere in Roth, Kruse nor Fitch is it taught that the bracket extend outside the perimeter edge of the bed, pursuant to claim 1. Therefore, the § 103 obviousness rejection should be reversed with regard to claim 1.

Doc. No. 31-7 at 2-3. The Board of Patent Appeals and Interferences (Board) agreed with Friesen, stating:

Based on our analysis and review of Roth and claim 1, it is our opinion that the only difference is the limitation that the bed has “guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed.” With regard to this difference, the examiner determined (final rejection, p. 2) that (1) “[i]t would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Roth by utilizing guide plates which inclined outwardly, as shown by Fitch, as this would make loading easier by compensating for some misalignment as the load is lowered onto the bed” and (2) “although the guide plates as modified do not have an upper edge that extends beyond the bed perimeter, it would have merely been a further design expediency to have so constructed the plates to compensate for even greater loading misalignment and/or misshapen containers.” We do not agree for the reasons that follow.

Based on our analysis and review of Kruse and claim 1, it is our opinion that the differences are (1) the bed lacks “guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed” and (2) the bed is not part of trailer so as to constitute a wheeled bed. With regard to these differences, the examiner

determined (final rejection, p. 3) that (1) “it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Kruse by adding wheels thereto so as to create a trailer vehicle, as this would offer greater flexibility and support” and (2) “[i]t would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Kruse by utilizing guide plates which inclined outwardly, as shown by Fitch, as this would make loading easier by compensating for some misalignment as the load is lowered onto the bed.” We do not agree for the reasons that follow.

In our view, the applied art (i.e., Roth and Fitch or Kruse and Fitch) would not have made it obvious at the time the invention was made to a person having ordinary skill in the art to have modified either Roth or Kruse so as to arrive at the subject matter of claim 1. Claim 1 requires that the bed has “guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed.” However, this limitation is not suggested by the applied prior art. In that regard, while Fitch does teach corner brackets having inclined walls within the perimeter edge of the bed, Fitch does not teach or suggest using guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of a container on the bed. To supply this omission in the teachings of the applied prior art, the examiner made a determination that although the guide plates suggested by the applied prior art do not have an upper edge that extends beyond the bed perimeter, it would have merely been a further design expediency to have so constructed the plates. However, this determination has not been supported by any evidence that would have led an artisan to arrive at the claimed invention.

In our view, the only suggestion for modifying the applied prior art in the manner proposed by the examiner to arrive at the subject matter of claim 1 stems from hindsight knowledge derived from the appellant's own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S. C. § 103 is, of course, impermissible. *See, for example, W. L. Gore and Assocs .. Inc. v. Garlock. Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 103 is reversed.

Doc. No. 31-9 at 8-11 (footnote omitted). The Board similarly overturned the prior rejections related to the flanges and lockbars, stating:

To supply this omission in the teachings of the applied prior art, the examiner made a determination (final rejection, pp. 4-5) that the pivoting lock bars of Titcombe, when added to the Ehlers apparatus, would necessarily be placed at the bed perimeter and the unlocked position would logically then be outside this perimeter; otherwise, loading would be difficult if not impossible. However, this determination has not been supported by any evidence that would have led an artisan to arrive at the claimed invention. In that regard, we note that if the pivoting lock bars of Titcombe were to be added to the Ehlers apparatus they would necessarily be placed beyond the perimeter of the containers but not necessarily be placed so that the unlocked position would be spaced outside the perimeter edge of the bed.

In any event, we fail to see any suggestion or motivation in the teachings of the applied prior art to make Ehlers' lock bars pivotable as claimed. At best, Titcombe would have suggested making Ehlers' locking plate 40 pivotable, however, this does not result in the claimed subject matter. In our view, the only suggestion for modifying Ehlers to arrive at the subject matter of claim 10 stems from hindsight knowledge derived from the appellant's own disclosure. As stated above, the use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is impermissible.

For the reasons set forth above, the decision of the examiner to reject claim 10 under 35 U.S.C. § 103 is reversed.

Doc. No. 31-9 at 17-18. Based on the Board's decision, Friesen was issued the '551 patent now owned by Meridian.

III. APPLICABLE STANDARDS

Before the fact finder can consider a claim of patent infringement, the court must determine what the claim (the patent) is. Thus, an infringement case has two distinct

stages. First, the court finds the proper construction of the patent. Second, the fact finder considers whether the patent was violated. *See Cook Biotech Inc. v. Acell, Inc.*, 460 F.3d 1365, 1372 (Fed. Cir. 2006).

The court interprets the words of the claim to determine their meaning and scope. *See Presidio Components, Inc. v. American Tech. Ceramics Corp.*, 702 F.3d 1351, 1358 (Fed. Cir. 2012) (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998); *Markman*, 517 U.S. at 391. “When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.” *02 Micro International, Ltd. v. Beyond Innovation Technology Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). “There are limits to the court’s duties at the patent claim construction state. For example, courts should not resolve questions that do not go to claim scope, but instead go to infringement, or improper attorney argument.” *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1319 (Fed. Cir. 2016) (citations omitted). However, claim construction is a quasi-factual question, and court is allowed to make factual findings and resolve fact-based disputes. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015). After the claim is construed, the fact finder then “compares the properly construed claims to the allegedly infringing device.” *Presidio Components*, 702 F.3d at 1358. Thus, my task is to “define[] the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction,” and then, “the task of determining whether the construed claim reads on the accused product is for the finder of fact.” *Markman*, 517 U.S. 370.

The interpretation and construction of patent claims is a matter of law solely for the court. *Markman*, 517 U.S. at 390. “It is the claims that define the metes and bounds of the patentee’s invention.” *Thorner v. Sony Computer Entertainment America, L.L.C.*, 669 F.3d 1362, 1367 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303,

1313 (Fed. Cir. 2005) (*en banc*)). Claim interpretation proceeds under the guidelines set forth in *Markman*. Accordingly:

To ascertain the meaning of claims, we consider three sources: the claims, the specification, and the prosecution history. Expert testimony, including evidence of how those skilled in the art would interpret the claims, may also be used. In construing the claims in this case, all these sources, as well as extrinsic evidence in the form of [] sales literature, were included in the record of the trial court proceedings.

Markman, 52 F.3d at 979 (citations and internal quotations omitted).

The construction process begins with the language of the claims. *See Renishaw P.L.C. v. Marposs Società Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). Claim terms are generally given their plain and ordinary meanings to one of skill in the art when read in the context of the specification and prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution.” *Thorner*, 669 F.3d at 1365. The standards for finding lexicography and disavowal are exacting. *Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). “To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning” and must “clearly express an intent to redefine the term.” *Thorner*, 669 F.3d at 1365. Disavowal requires that “the [intrinsic record] makes clear that the invention does not include a particular feature.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed Cir. 2001).

The ordinary meaning of a claim term is not “the meaning of the term in the abstract.” *Id.* at 1321. Instead, “the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent. *Id.*; *see also Toro Co. v. White*

Consol. Indus., Inc., 199 F.3d 1295, 1299 (Fed. Cir. 1999) (“Determining the limits of patent claim required understanding its terms in the context which they were used by the inventor, considered by the examiner, and understood in the field of the invention.”); *Anderson v. Int’l Eng’g & Mfg., Inc.*, 160 F.3d 1345, 1348-49 (Fed. Cir. 1998) (“a word describing patented technology takes its definition from the context in which it was used by the inventor.”). “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which [it] appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims. *Id.* at 1323. The Federal Circuit views intrinsic evidence as “the most significant source of the legally operative meaning of disputed claim language.” *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

When the meaning of a claim term is in doubt, the specification is the “single best guide to the meaning of a disputed term” and is typically dispositive on the issue of claim construction. *Id.* “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.” *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115-16 (Fed. Cir. 2004). Because claim terms are construed based on the intrinsic evidence to the particular patent at issue, one court’s construction of a word in one patent is not conclusive, and may not even be probative, of that word’s meaning in another patent. *e.Digital Corp. v. Futurewei Tech., Inc.*, 772 F.3d 723, 727 (Fed. Cir. 2014). It is improper to rely on extrinsic evidence when any ambiguity in the claims can be resolved by reference to the intrinsic record alone. *Id.* at 1583.

Determining the ordinary meaning as understood by an ordinary person of skill in the art is the heart of claim construction. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d

1353 (Fed. Cir. 2017). In the most desirable situation, the ordinary meaning of a claim’s language may be apparent to lay judges, and the claim construction may involve little more than the application of the widely accepted meaning of commonly understood words. *Brown v. 3M*, 264 F.3d 1349, 1352 (Fed. Cir. 2001). “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.” *Id.* at 1361. This does not mean, however, that a court must attempt the impossible task of resolving all questions of meaning with absolute, unambiguous finality. *Eon Corp.*, 815 F.3d at 1318 (Fed. Cir. 2016). “[A] sound claim construction need not always purge every shred of ambiguity.” *Id.* (quoting *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007)); see also *Vivid Techs., Inc. v. Am. Science & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

“[T]he construction of claims is simply a way of elaborating the normally terse claim language: in order to understand and explain, but not to change, the scope of the claims.” *Scripps Clinic & Research Foundation v. Genetech, Inc.*, 927 F.2d 1565, 1580 (Fed. Cir. 1991). Courts have wide latitude in the type of sources that could be used in construing claim meaning. *Phillips*, 415 F.3d at 1324 (the court is not “barred from considering any particular sources or required to analyze sources in any specific sequence.”). The claims construction process is not confined to the intrinsic record alone, however extrinsic evidence may not be used “to contradict claim meaning that is unambiguous in light of the intrinsic evidence.” *Id.* However, courts must be wary of extrinsic evidence because “legal error arises when a court relies on extrinsic evidence that contradicts the intrinsic record.” *Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1379 (Fed. Cir. 2016).

The doctrine of claim differentiation creates a presumption that distinct claims, particularly an independent claim and its dependent claim, have different scopes. *World Class Tech. Corp. v. Ormco Corp.*, 769 F.3d 1120, 1125 (Fed. Cir. 2014). “‘In the most specific sense, claim differentiation refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim.’” *Enzo Biochem, Inc. v. Applera Corp.*, 780 F.3d 1149, 1156-57 (Fed. Cir. 2015) (quoting *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1381 (Fed. Cir. 2006) (citing *Nazomi Commc’ns, Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1370 (Fed. Cir. 2005))).

However, claim differentiation is merely a presumption. *CardSoft (assignment for the Benefit of Creditors), LLC v. VeriFone, Inc.*, 807 F.3d 1346, 1352 (Fed. Cir. 2015). “It is ‘a rule of thumb that does not trump the clear import of the specification.’” *Id.* (quoting *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1323 (Fed. Cir. 2011); see also *Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1359 (Fed. Cir. 2012) (en banc) (“[C]laim differentiation is not a hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history.” (citation and quotation omitted.))). “There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims.” *Tandon Corp. v. U.S. Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987).

IV. ANALYSIS

As noted above, the parties filed a joint claim construction statement, which is generally intended to narrow the scope of the *Markman* process:

Term	Agreed Construction
<p>1. An improved trailer for transporting a bulk seed box, the box having first and second sidewalls, a bottom, a top, and a flange extending along the sidewalls adjacent the bottom of the box, the trailer comprising:</p> <p style="padding-left: 40px;">a wheeled bed for supporting a bulk seed box, the bed having a perimeter edge;</p> <p style="padding-left: 40px;">a hopper extending below the bed for receiving seed from the bulk seed box;</p> <p style="padding-left: 40px;">a conveyor operatively connected to the hopper for unloading seed from the hopper;</p> <p style="padding-left: 40px;">. . . .</p>	<p>Meridian believes these clauses should be given their plain and ordinary meaning.</p> <p>HitchDoc contends that, other than the terms “perimeter edge” and “bed,” these clauses do not require construction.</p>
<p>2. The improved trailer of claim 1 wherein the bed has four corners and the guide plates are located at the corners of the bed.</p>	<p>Meridian believes this claim should be given its plain and ordinary meaning.</p> <p>HitchDoc contends that, other than the terms “bed” and “guide plates,” this claim does not require construction.</p>
<p>3. The improved trailer of claim 1 further comprising lock bars . . . to secure the seed box to the bed.</p>	<p>Meridian believes this claim should be given its plain and ordinary meaning.</p> <p>HitchDoc contends that, other than the phrases “lock bars on the bed” and “to overlappingly engage the flange of the seed box,” this claim does not require construction.</p>

<p>9. The improved trailer of claim 1 wherein the conveyor is an auger including a first inner section and a second outer section pivotally attached to the first section for movement between transport and discharge positions, and including a gas cylinder to facilitate movement of the second section between the transport and discharge positions.</p>	<p>The parties agree that this claim does not require construction.</p>
<p>10. The improved trailer of claim 1 wherein each guide plate extends outwardly at an obtuse angle from the bed.</p>	<p>Meridian believes this claim should be given its plain and ordinary meaning</p> <p>HitchDoc contends that, other than the terms “guide plate” and “bed,” this claim does not require construction.</p>
<p>11. The improved trailer of claim 1 wherein the guide plates define an enlarged box entrance sloping downwardly and inwardly toward the bed so that the box will automatically center on the bed when loaded onto the bed.</p>	<p>Meridian believes this claim should be given its plain and ordinary meaning</p> <p>HitchDoc contends that, other than the terms “bed” and “guide plate(s),” this claim does not require construction.</p>

Doc. No. 24 at 2-3. Notwithstanding its repeated statements that particular claims “should be given [their] plain and ordinary meaning,” Meridian used its brief to provide specific definitions for various “plain and ordinary” terms.⁴ Thus, each party has presented argument regarding the following terms: (1) bed, (2) perimeter edge, (3) guide plates, (4) inclining upwardly and outwardly, (5) lock bars on the bed and (6) to overlappingly engage the flange of the seed box. Those terms appear in particular claims as follows:

⁴ In its brief, Meridian states that its “constructions can be left to the words of the claims themselves, with the ‘plain and ordinary meaning’ as the only construction necessary.” Doc. No. 37 at 7. Thus, Meridian supports either no construction or its suggested construction.

Claim Construction Requested	Claim No. Source
Bed	Claims 1, 2, 3, 10, and 11
perimeter edge	Claims 1, 10, and 11
guide plates	Claims 1, 2, 10, and 11
inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed	Claim 1
lock bars on the bed	Claim 3
to overlappingly engage the flange of the seed box	Claim 3

I will consider each of these issues below.

A. *Bed*

Plaintiff's Construction of "bed"	The structure that receives and supports the seed boxes.
Defendant's Construction of "bed"	A flat elevated bed with a top surface and a side surface.

1. *The parties' arguments*

Meridian states:

As claim 1 notes, [the bed] is the structure that receives and supports the bulk seed box. (*Id.* at col. 4, l. 43.) . . . The bed itself includes many features, some of which, like the guide plates, are called out as additional

features in the claims themselves. As noted in the specification, the “bed 14 of the trailer 10 is provided with a plurality of upwardly and outwardly extending guide plates 22 that facilitate loading of the box 18 onto the bed 14.” (*Id.* at col. 2, ll. 52-54.) Claim 1 specifically requires that the bed include the guide plates, claiming “the bed having guide plates” (*Id.* at claim 1, col. 4, l. 49.) As the purpose of the guide plates is to receive the seed boxes by aligning or centering the seed box onto the bed, if a definition of bed beyond the term itself is deemed necessary, defining the bed as the structure that receives and supports the seed boxes is consistent with the claims and specification of the ‘551 Patent.

It is also consistent with how dictionaries from around the time of the invention defined the term. *Webster’s Third New International Dictionary* from 2002 (published during the prosecution of the ‘551 Patent) defines the term bed as “a flat or level surface[,]” “a foundation for a machine or apparatus: the rigid part of a machine serving to support or secure[,]” or “the body, box, or supporting frame of a vehicle (as a wagon, truck, or trailer); sometimes: the floor or bottom of a truck or trailer.” (Johnson Dec., Ex. 9.) No special definition of “bed” was ever given during the prosecution of the ‘551 Patent and the inventor never disavowed the full scope of this commonly understood term. Bed should be given its plain and ordinary meaning.

Doc. No. 31 at 16-17.

HitchDoc argues for a more expansive construction:

The specification explicitly states that the referenced bed is flat and elevated: “The trailer 10 includes a flat elevated bed 14 supported by legs 16.” (‘551 Patent col. 2, lns. 38-39 (emphasis added).) Moreover, the figures depicting the claimed trailer bed all depict a flat elevated bed. (*Id.* Figs. 1-3.)

Additionally, the bed must have a top surface and a side surface. Claim 1’s first limitation claims a trailer including “a wheeled bed for supporting a bulk seed box, the bed having a perimeter edge.” (‘551 Patent col. 4, lns. 43-44 (emphasis added).) The specification references the “perimeter edge of the bed,” but does not expressly define the clause: the specification states that “the sloped guide plates are positioned around the perimeter edge of the bed 14,” (*id.* col. 2, lns. 55-56). Garry Friesen, the

'551 Patent's inventor, has been deposed. Friesen testified that the bed has a top surface and a side surface and that the perimeter edge of the bed is where the bed's top surface and side surface meet. (Shattuck Aff. Ex. D, Friesen Dep. 97-101; Shattuck Aff. Ex. E, Dep. Ex. 312 at 2 (MER_0037738).) . . .

Accordingly, if the bed has a "perimeter edge," and the "perimeter edge" is where the top surface and the outer side surface of the bed meet, then the bed must have a top surface and a side surface.

Doc. No. 30 at 6-8. Meridian objects to that construction, stating:

HitchDoc's proposed construction of the term attempts to read in limitations from the '551 specification – a big claim construction "no-no." *See Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1306 (Fed. Cir. 2003) ("Notwithstanding the fact that the claim language must be examined in light of the written description, limitations may not be read into the claims from the written description."). HitchDoc commits this fundamental error by suggesting that the term "bed" be construed as a flat elevated bed with a top surface and a side surface." (Joint Claim Construction Statement, ECF No. 24, at 2) (emphasis added). While the specification does talk about a bed that is flat and a bed that is elevated and the figures show the bed has top surfaces and side surfaces, there is no need to read these additional limitations into the claims. HitchDoc's proposed construction shows the dangers of incorporating unnecessary limitations into the claims. For example, here, while the bed is described as a flat and elevated bed at times, it is also described in the '551 Patent's specification as a wheeled bed ('551 Patent, ECF No. 2-1, col. 1, l. 52), a trailer bed (*Id.* at col. 3, l. 43), and usually as just a bed. HitchDoc's unilateral selection of a specific type of bed for its own purposes ignores the public notice function served by the broad use of bed throughout the specification and claims of the '551 Patent. Bed should be defined by its plain and ordinary meaning.

Doc. No. 31 at 20-21. After again citing the patent's specification, HitchDoc's rebuttal is:

Meridian proposes that "bed" be construed as "the structure that receives and supports the seed boxes." This proposed construction is broader than

the plain and ordinary meaning of “bed” referenced by Meridian in the Joint Claim Construction Statement. After stating in the Joint Claim Construction Statement that “bed” did not require construction by the Court, Meridian stated that “bed” “should have its plain and ordinary meaning consistent with what is shown in the specification, as the frame which supports the seed box.” (Doc. 24 at 6.) Now, Meridian is attempting to expand the meaning of “bed” beyond a frame for supporting a seed box to any “structure” that receives and supports the seed boxes. By replacing “bed” with “structure,” Meridian is improperly trying to remove the “bed” limitation from the ‘551 Patent, which would expand the reach of the patent claims beyond what was disclosed and claimed in the ‘551 Patent. Additionally, the construction of “bed” need not include any language about receiving and supporting the seed boxes, as that language is already included in the claim, which states that the bed is “for supporting a bulk seed box.” In short, Meridian’s proposed construction of “bed” adds words that are already included in the patent, while replacing the word “bed” with the broader term “structure.”

Doc. No. 35 at 11.

2. Analysis and Final Construction

“Bed” is one of the simpler terms presented for construction in this case. I agree with Meridian that it is not a complex term. But, because the parties dispute its meaning, I will consider the proposed constructions according to the applicable standards and the available evidence.

As set out above, in constructing a claim there is hierarchy of relevant evidence. The first and most important evidence is the language of the claim as stated in the patent. Second, the court looks to intrinsic evidence from the specification (or, in lay terms, from the rest of the patent document). Third, the court considers the patent prosecution history. Fourth is all other extrinsic evidence, whether it be deposition testimony, case law, dictionaries, or other documents. *See UUSI, LLC v. United States*, 131 Fed. Cl. 244, 256 (2017). The court considers the words in the patent to find their ordinary

meaning (unless otherwise defined) through the eyes of an ordinary person skilled in the art. *Id.*

At the outset, I reject HitchDoc's proposed construction of "bed." By stating that a "bed" is "a flat elevated bed with a top surface and a side surface," I would be limiting the construction beyond what is contained in the claims. Nothing in the claims requires that the bed be perfectly flat or have a side surface. As Meridian points out, a specification should not be used to unnecessarily limit a claim. *Phillips*, 415 F.3d at 1313. Additionally, the phrase top surface is so obvious that to define it would only confuse the issue, as by the terms of the claims themselves the bed exists to support the seed box and has a perimeter edge.

For the same reason, I reject Meridian's proposed construction. Constructing a term that is already sufficiently defined would only confuse and complicate this process. Defining the term bed as the structure that receives and supports the seed boxes when that is textually explicit in the claim is redundant. It is clear from the terms of the claims that the bed has a top (as it supports the seed box) a bottom (as the hopper is below it) is on wheels (wheeled) and has a definable edge.

As noted above, the 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. This does not mean, however, that a court must attempt the impossible task of resolving all questions of meaning with absolute, unambiguous finality. *Eon Corp. IP Holdings*, 815 F.3d at 1318. Obviously, the term "bed" has multiple meanings (e.g., "its bed time," "a flower bed," "let's put this project to bed" and "the bed of my truck"). However, a person skilled in this particular art, in this context, would understand the type of bed referenced in the claims at issue. Indeed, the term bed, as used in the '551 patent, appears to have no more of a special or unique meaning to a

person of ordinary skill in the art than it would to a lay juror. Accordingly, when read in the context of the entire patent, construing bed to have the plain and ordinary meaning would have no effect on the meaning, metes, or bounds of the claims in which that term is used.

In short, nothing in the intrinsic record suggests that this term has any special meaning to a person of ordinary skill in the art. *See Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). I find that the plain and ordinary meaning of the term bed needs no construction. Additionally, I specifically reject the extrinsic evidence proffered by HitchDoc (Friesen’s deposition and the dictionary definitions) as unnecessary evidence regarding this claim. “Bed” will be given its plain and ordinary meaning.

B. Perimeter Edge:

Plaintiff’s Construction of “perimeter edge”	The edge around the perimeter of the bed.
Defendant’s Construction of “perimeter edge”	Where the top surface and the outer side surface of the bed meet.

1. The parties’ arguments

Meridian states:

Like “bed” before it, “perimeter edge” is used in the ‘551 Patent claims in accordance with its plain and ordinary meaning. Confirming that the plain and ordinary meaning applies, the perimeter edge is not specially defined in the ‘551 Patent specification and was not defined specially in the ‘551 Patent’s prosecution history. Examples of the perimeter edge are shown and discussed in the ‘551 Patent and prosecution history. For instance, the ‘551 Patent discusses that the guide plates can be positioned around the perimeter edge of the bed. (*Id.* at col. 2, l. 54-56.) This is shown in Figure

2 of the '551 Patent where the guide plates 22 extend beyond the perimeter edge of the bed 14. (*Id.* at fig. 2). . . The perimeter edge was discussed during the prosecution of the '551 Patent application as it was used to distinguish the '551 Patent claims from the prior art. For example, Fitch failed to teach or suggest the guide plates of the '551 Patent because the guide plates in Fitch were not inclined "outwardly from the perimeter edge of the bed" as required in the claims.

Doc. No. 31 at 21-22. HitchDoc posits that:

[T]he perimeter edge of the bed is where the top surface and the outer side surface of the bed meet. "Perimeter" is defined as the outer boundary of an object. *Merriam-Webster's Online Dictionary*, based on print version of Merriam-Webster's Collegiate Dictionary, Eleventh Edition (2003) ("Merriam-Webster"), <http://www.merriam-webster.com/dictionary/perimeter>, ("the boundary of a closed plane figure") . . . "Edge" is defined as the line where two plane surfaces of an object meet. Merriam-Webster, <http://www.merriam-webster.com/dictionary/edge>, ("a line or segment that is the intersection of two plane faces (as of a pyramid) or of two planes"). . .

Doc. No. 30 at 7. After citing deposition testimony from Friesen, HitchDoc argues:

Meridian states that "perimeter edge" of the bed is not specially defined in the '551 Patent's specification or prosecution history. (Doc. 28-1 at 21.) Meridian ignores, however, that claim 1 requires "guide plates inclining upwardly and outwardly from the perimeter edge of the bed," and that the "present invention," is depicted in Figure 1 of the '551 Patent with guideplates that begin to incline upwardly and outwardly from the point where the top surface of the bed intersects with the outer side surface of the bed. (Doc. 30 at 18-19.) Indeed, all depictions of the invention show guide plates that begin to incline upwardly and outwardly where the top surface meets the outer side surface of the bed. (Doc. 30 at 19.) If the claimed invention has guide plates inclining upwardly and outwardly from the perimeter edge of the bed, and the claimed invention is exclusively depicted as having guide plates inclining upwardly and outwardly from the point where the top surface of the bed intersects with the outer side surface of the bed, then the perimeter edge must be where the top surface and outer side surface meet. As Meridian acknowledges, a claim must be limited to the disclosed embodiment unless there is a basis in the written description to

construe the claim more broadly. (Doc. 28-1 at 17 (citing *Toro*, 199 F.3d at 1301).) . . . Although Meridian contends that “perimeter edge” of the bed should be given its plain and ordinary meaning, (Doc. 28-1 at 21), Meridian fails to proffer any dictionary definitions of “perimeter” or “edge.” . . . Meridian’s proposed construction does not construe or define the “perimeter edge of the bed” in a meaningful manner; it mostly just rearranges the order of the words in the clause, to read “the edge around the perimeter of the bed.” Consequently, Meridian’s proposed construction does not specifically tell the jury what constitutes the perimeter edge of the bed or where the perimeter edge is actually located on the bed.

Doc. No. 35 at 12-13.

2. Analysis and Final Construction

Like “bed,” the “perimeter edge” is a relatively straightforward phrase that needs no additional construction. HitchDoc harshly, but correctly, states that Meridian’s proposed construction (“the edge around the perimeter of the bed”) does little more than rearrange the words in the claim related to the edge. That said, while HitchDoc’s proposed construction (“where the top surface and the outer side surface of the bed meet”) does use different words, it is equally unhelpful. The best way to describe the edge of something is to use the word edge. The phrase “where the top surface and the outer side surface of the bed meet” provides a less-clear description of what is being described than simply saying “the perimeter edge of the bed.” Accordingly, applying the standards set out above, I find that “perimeter edge” should be given its plain and ordinary meaning.⁵

⁵ Again, I specifically reject as unnecessary HitchDoc’s proffered extrinsic evidence, including dictionary definitions and Friesen’s testimony.

C. *Guide Plates*

Plaintiff's Construction of "guide plates"	The structure that directs the motion of the seed boxes.
Defendant's Construction of "guide plates"	Thin flat pieces of metal.

1. *The parties' arguments*

Meridian states:

The claim terms "guide plates" are consistently used as the structure that directs the motion of the seed boxes. Nothing in the '551 Patent defines a guide plate in a unique way and nothing in the '551 Patent or its prosecution history shows any disavowal of the full scope and meaning of the terms. This leaves the public on notice that the inventor intended "guide plates" to have its plain and ordinary meaning. This plain and ordinary meaning, as a structure that directs the motion of the seed boxes, is consistent with dictionary definitions at the time. For example, "guide" is defined in the dictionary as "a contrivance for directing the motion of something; esp: such a contrivance (as in a tool) having a directing edge, surface, or channel." (Johnson Dec., Ex. 10.) "Plate" should have its plain and ordinary meaning, which is reflected in the dictionary definition as "a smooth usu. nearly flat and relatively thin piece of metal or other material."

Doc. No. 31 at 20. HitchDoc's proposed construction is considerably different:

The term "guide plates" should be defined consistent with the structure disclosed in the '551 Patent. All depictions of the guide plates in the patent reveal that the guide plates are thin flat pieces of metal. ('551 Patent Figs. 1-3.) Moreover, HitchDoc's construction is consistent with the dictionary definition of a plate used in this context. *Merriam-Webster*, <http://www.merriam-webster.com/dictionary/plate>, ("a smooth flat thin piece of material") . . .

Doc. No. 30 at 9. Meridian strongly objects to HitchDoc's proposed construction:

HitchDoc proposes to redefine the term “guide plates” as “thin flat pieces of metal.” This definition is wholly unnecessary and places extraneous limitations on the claims. HitchDoc seeks to limit claim 1 to flat pieces of metal, in what is likely an attempt to provide an avenue to design around the claimed invention by using some other material, *e.g.*, a hard composite or some other shape, *e.g.*, a curved or multi-shaped surface. There is no requirement that the guide plate material be metal or thin. Any suitable material can be used and any suitable thickness can be used. Notably, HitchDoc does not cite the ‘551 Patent to support its argument that the guide plates be metal or thin, due to the fact that ‘551 Patent does not use the words metal or thin, or require that the guide plates be made of any particular material or have any particular thickness. Again, this is analogous to the *Hoganas* case where the court interpreted a shape limitation to include restrictions on size. Here, HitchDoc seeks to place restrictions on the material that the guide plates are made of and the thickness of the guide plates. *Hoganas*, 9 F.3d at 950. This is improper. HitchDoc seeks to further limit the guide plates to require a specific shape, *e.g.*, that they are flat. There is no reason that one could not use a guide plate with a slightly curved surface that inclines upwardly and outwardly. However, such an embodiment would be excluded by HitchDoc’s proposed construction. . . . The words offered by HitchDoc to define the term “guide plates” are no more than “limitations added wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim” and only serve to convolute the claim language that is clear on its face. *Hoganas*, 9 F.3d at 950 (quoting *E.I. du Pont*, 849 F.2d at 1433). Meridian continues to maintain that HitchDoc’s proposed construction of the term “guide plates” is not necessary and that the claim term can simply be construed as having their plain and ordinary meaning.

Doc. No. 37 at 16-18. HitchDoc’s rebuttal merely repeats its claim that a proper construction of guide plates is limited to thin pieces of metal. Doc. No. 35.

2. *Analysis and Final Construction*

Unlike the prior two sections, the phrase “guide plates” does require a construction beyond its ordinary meaning. However, of the remaining contested claim constructions, this is the easiest to resolve. As noted above, Meridian advocates for a definition of

guide plates as “the structure(s) that direct the motion of the seed boxes” while HitchDoc proposes “thin flat pieces of metal.”

I agree with Meridian that HitchDoc’s construction “is wholly unnecessary and places extraneous limitations on the claims” and that HitchDoc likely seeks to limit claim 1 to flat pieces of *metal* to exclude guide plates made of an alternate material from the scope of that claim. Accordingly, for the following reasons, I reject HitchDoc’s proposed construction. First, and most basically, HitchDoc’s proposed construction does nothing to explain the phrase needing construction. As noted above, the purpose of claim construction is to bring clarity to a term or phrase whose meaning may be in doubt. In some cases, specification of the material might be a relevant part of a properly constructed and defined phrase.

However, in this case, defining guide plates as thin flat pieces of metal adds an extra limitation not contained in the claim (the type of material used), adds additional ambiguous terms (thin and flat) and neglects to impart a meaningful explanation of the purpose of the thin flat metal pieces in the context of the patent as a whole. Such a construction is improper. *See E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988); *Anderson*, 160 F.3d at 1348-49. In the context of the ‘551 patent, thin flat pieces of metal could refer to any number of components, including the lock bar, slide gate or the lever arm. Accordingly, “thin flat pieces of metal” is a wholly inadequate construction for guide plates.

Second, even if thin flat piece of metal was otherwise proper, HitchDoc has jumped over the first three levels of evidence (the claim, the specification and the prosecution history) to go straight to extrinsic evidence (dictionaries). This is not proper unless absolutely necessary. In this construction, it is not.

Nor can I agree with Meridian’s proposed construction (“the structure that directs the motion of the seed boxes”). I agree with HitchDoc that the word “structure” would

expand the scope of the claim. However, I disagree with HitchDoc that it is necessary to resort to extrinsic evidence, such as the dictionary definition of guide or plate. Instead, the phrase guide plate can be properly constructed by first looking to the claims, and second to the broader specification.

The description of the invention indicates that guide plates are primarily responsible for facilitating the loading of the seed box onto the bed. Doc. No. 30-2 at 7. The description also states that the guide plates function to align the seed boxes onto the bed. *Id.* Combined with the claim language cited above, I find that the appropriate construction of “guide plates” is “the plates that guide the seed boxes into position onto the bed.”

D. Inclining Upwardly and Outwardly

Plaintiff’s Construction of “Inclining Upwardly and Outwardly from the Perimeter Edge of the Bed to Facilitate Centering of the Box on the Bed”	Deviating from the horizontal plane of the bed toward a higher position and extending outside the perimeter edge of the bed.
Defendant’s Construction of “Inclining Upwardly and Outwardly from the Perimeter Edge of the Bed to Facilitate Centering of the Box on the Bed”	Sloping upwardly and outwardly in a direction that is neither vertical nor horizontal, such slope starting at the point where the top surface and the outer side surface of the bed meet.

1. The parties’ arguments

Meridian states:

[T]hese terms should be left to their plain and ordinary meaning. The plain and ordinary meaning of these terms, as reflected in dictionary definitions of the time, are consistent with Meridian’s position that the phrase in its entirety means deviating from the horizontal plane of the bed toward a

higher position and extending outside the perimeter edge of the bed. For example, “inclining” should have its plain and ordinary meaning, which is reflected in the dictionary definition as “to deviate from a line, direction, or course; specif: to deviate from the vertical or horizontal”, such as deviating from the horizontal plane defined by the perimeter edges of the bed. (Johnson Dec., Ex. 12.) “Upwardly” should have its plain and ordinary meaning, which is reflected in the dictionary definition as “toward a higher position: in a direction from a lower to higher place”, such as a plate extending toward a higher position from the horizontal plane defined by the perimeter edges of the bed. (Johnson Dec., Ex. 13.) “Outwardly” should have its plain and ordinary meaning, which is reflected in the dictionary definition as “toward the outside: in an outward direction”, such as a plate extending toward the outside from the horizontal plane defined by the perimeter edges of the bed. (Johnson Dec., Ex. 14.)

Again, this is consistent with how the Examiner understood the limitation. During prosecution of the ‘551 Patent, Mr. Friesen’s claim 1 was amended to emphasize the guide plates of his invention went outside of the bed’s perimeter edge.

Do. No. 31 at 24-25.

HitchDoc argues for a more-limited construction:

The specification and prosecution history confirm that the claimed guide plates must be sloped; that “sloped” and “inclined” are synonymous; and that those terms mean to deviate from the horizontal and vertical. The specification describes and depicts the “present invention” as having sloped guide plates. More particularly, the specification states that “[a] further objective of the present invention is the provision of an improved trailer for bulk seed boxes which includes upwardly and outwardly sloped guide plates to facilitate loading of the box on the bed.” (‘551 Patent col. 1, lns. 22-25 (emphasis added).) . . . Figure 1 [from the 551 patent], which depicts the “present invention,” not an embodiment of the invention, shows that the guide plates 22 are sloped. When a patent describes the features of the “present invention” as a whole, as opposed to an embodiment of the invention, the claimed invention is limited to that description. *Regents of the Univ. of Minn. v. AGA Medical*, 717 F.3d 929, 936 (Fed. Cir. 2013) . . . Because the patentee described and depicted the “present invention” as

having sloped guide plates, claim 1 must be construed as requiring sloped guide plates.

Doc. No. 30 at 12-14.

Both parties rely on the prosecution history in attempting to define this term. Meridian explains the distinction between the '551 patent and the Fitch patent discussed above:

The Examiner attempted to further reject the claims by relying on a reference that went both upwardly and outwardly—U.S. Patent No. 1,675,701 to Fitch. (Johnson Dec., Ex. 7, 11/01/2014 Examiner's Answer, 4.) The Fitch bracket, which the Examiner understood to be inclining upwardly and outwardly . . . [T]he guide plates of Fitch did not incline outwardly from the perimeter edge of the bed, as required in claim 1. . . The Examiner argued this guide plate, which he understood to incline upwardly and outwardly, could be placed to do so from the perimeter edge of the bed, as required in claim 1, because “it would have merely been a further design expedience to have so constructed the plates” (Johnson Dec., Ex. 8, 6/10/2005 Decision on Appeal, 8.) The Board did not agree and found that “while Fitch does teach corner brackets having inclined walls within the perimeter edge of the bed, Fitch does not teach or suggest using guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of a container on the bed.” (*Id.* at 9-10.) Consistent with the Board's decision, the Examiner's understanding, and the dictionary definitions from the time period, “inclining upwardly and outwardly from the perimeter edge of the bed” should have its plain and ordinary meaning – as deviating from the 25 horizontal plane of the bed toward a higher position and extending outside the perimeter edge of the bed.

Doc. No. 31 at 26-28. HitchDoc states:

The prosecution history also establishes that the guide plates must be inclined (sloped). Original claim 1 of the patent application on which the '551 Patent was issued claimed “the bed having guide plates extending upwardly and outwardly to facilitate centering of the box on the bed.” (Shattuck Aff. Ex. F at 9.) The examiner rejected this claim as anticipated by Roth, noting that “Roth shows a trailer for bulk seed containers including

wheeled bed 12, hopper 64, conveyor 60, and guide plates 52 which extend ‘upwardly and outwardly,’ as broadly claimed.” (*Id.* Ex. G at 3-4.) To overcome the prior art cited by the examiner (U.S. Patent No. 6,092,974 to Roth and U.S. Patent No. 5,465,829 to Kruse), Friesen amended claim 1 by replacing “extending” with “inclining” and adding “from the bed”: “the bed having guide plates extending inclining upwardly and outwardly from the bed to facilitate centering of the box on the bed.” (Shattuck Aff. Ex. H at 2.) Friesen explained that this amendment required the claimed guide plates to be inclined as opposed to extending straight upwardly . . . The examiner rejected the amended claim as obvious over Roth in view of Fitch (U.S. Patent No. 1,675,701). (*Id.* Ex. I at 2.) The examiner noted that it would have been obvious to combine Roth, which teaches guide plates extending upwardly, with Fitch, which discloses guide plates inclining outwardly. (*Id.*) As a result, Friesen amended the claim to its current form by inserting the phrase “perimeter edge of the”: “the bed having guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed.” (*Id.* Ex. J at 2.) To overcome the examiner’s rejection, Friesen argued that although the examiner found that Fitch’s brackets “incline upwardly and outwardly from the bed,” the Fitch brackets do not incline outwardly from the perimeter edge of the bed, as now required by claim 1. (*Id.* at 6.) The examiner rejected the second amended claim based on obviousness, and Friesen appealed to the Board of Patent Appeals and Interferences (“Board”). (*Id.* Ex. K). On appeal, Friesen argued that claim 1 should be allowed, because while the prior art taught guide plates extending straight upwardly and guide plates inclining upwardly and outwardly from the bed, the prior art did not teach guide plates inclining upwardly and outwardly from the perimeter edge of the bed. (*Id.* Ex. K at 4-5; Ex. L at 2.) The Board agreed with Friesen and found the claim 1 was allowable over the referenced prior art because the prior art did not specifically teach guide plates “inclining upwardly from the perimeter edge of the bed.” (*Id.* Ex. M at 8-11.) Simply put, claim 1 would not have been allowed if Friesen had not limited the claim to guide plates inclining, as opposed to extending, upwardly and outwardly, from the perimeter edge of the bed.

Doc. No. 30 at 14-16. HitchDoc also refers to dictionary definitions:

“Inclined” is defined as “to deviate from a line, direction or course; specifically: to deviate from the vertical or horizontal,” *Merriam-Webster*,

<http://www.merriam-webster.com/dictionary/incline> . . . Similarly, “sloped” is defined as “to lie or fall in a slant: INCLINE,” *Merriam-Webster*, <http://www.merriam-webster.com/dictionary/slope> . . . In other words, the dictionary definitions establish that an inclining or sloped object is one that is neither vertical nor horizontal.

Doc. No 30 at 16-17.

Meridian spends the bulk of its responsive brief expanding its argument regarding the term inclining upwardly and outwardly. Specifically, it posits that HitchDoc’s proposed construction, “requires not only the use of additional, extraneous claim limitations, but also substitution of easily understood claim terms with other terms.” Doc. No. 37 at 19. Meridian again emphasizes that, “[t]o support this substitution, HitchDoc relies on the specification’s description that includes the word “sloped.” (ECF No. 30, at 12.) This, however, is improper as language from the specification is not to be read into the claims or substituted with claim terms.” *Id.* Meridian explains that in its view, the sole basis for HitchDoc’s proposed construction is to avoid liability on the infringement claim. Meridian also objects to the HitchDoc’s suggestion that the slope/incline starts at the perimeter edge of the bed. Meridian states that slope or incline extending from the edge of the bed is merely a preferred embodiment, citing *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1316 (Fed. Cir. 2006). Meridian then returns to its prior argument regarding the prosecution history and states: “To overcome the rejection Friesen’s claims were amended to add ‘perimeter edge of the’ as shown in underline: ‘the bed having guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed.’” Doc. No. 37 at 23 [emphasis in original]. Meridian concludes:

[T]he construction of this limitation at the USPTO found that the upper edge needed to extend beyond the perimeter edge of the bed, not that the entire guide plates must start at the point that a top surface and side surface meet and slope upwardly and outwardly in a direction that is neither horizontal

nor vertical as proposed by HitchDoc. Rather, as proposed by Meridian the guide plates must incline upwardly and outwardly from the perimeter edge of the bed. Thus, the prosecution history is consistent with Meridian's proposed construction that is based on the claim language and not HitchDoc's.

Doc. No. 37 at 24.

In response, HitchDoc emphasizes that the specification refers various times to slopes. Doc. No. 35 at 15-16. HitchDoc then returns to its dictionary definition-based argument that slope and incline are synonymous. *Id.* Specifically, HitchDoc states:

Meridian's proposed construction of "inclining" is contrary to common sense and the various dictionary definitions cited by the parties, which establish that "inclining" means sloped; slanted; and to deviate from the horizontal or vertical. Meridian's proposed construction recognizes that "inclining" means to deviate from the horizontal, but conveniently ignores that "inclining" also means to deviate from the vertical. An inclining object can be neither horizontal nor vertical: it must be sloped or slanted.

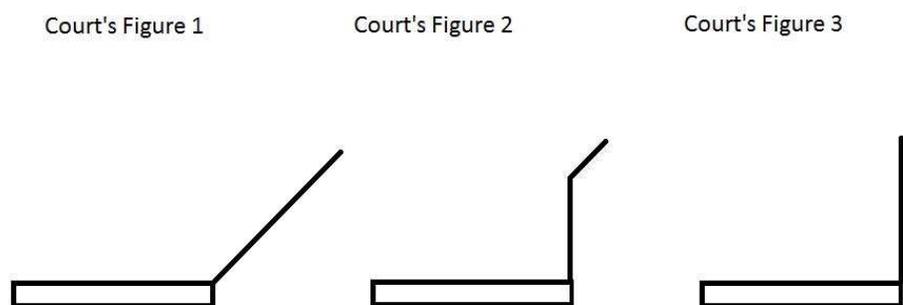
Doc. No. 35 at 17. HitchDoc then repeats its argument that the amendment to the '551 patent in response to the Roth and Fitch prior art specifically included the claim that the guide plates inclined from the perimeter edge to facilitate centering of the seed box, thus abandoning the previous rejected language that the guide plates extended upward and outward to facilitate centering of the seed box. HitchDoc states:

Meridian's proposed construction of "inclining" is not based on the '551 Patent, the prosecution history, or any dictionary definition; Meridian's construction is based solely on its desire to expand the scope of claim 1 to read upon the box guides of HitchDoc's Travis Seed Cart.

Doc. No. 35 at 18. HitchDoc then concludes that the term "from the perimeter edge" should be constructed to mean starting at that point. HitchDoc grounds that argument in dictionary definitions and the prosecution history. *Id.* at 22-23.

2. *Analysis and Final Construction*

The claim term “guide plates inclining upwardly and outwardly from the perimeter edge of the bed to facilitate centering of the box on the bed” is the most hotly-contested of the parties’ disputes. To somewhat simplify the issue, I have created the following (very crude) diagram of three possible interpretations of the disputed portion of the term:



Under Meridian’s proposed construction (“deviating from the horizontal plane of the bed toward a higher position and extending outside the perimeter edge of the bed”), it contends that figures 1, 2 and, even, 3 *could* be included in the claim. *See, e.g.*, Doc. No. 37 at 23 (“the prosecution history actually indicates that upwardly and outwardly can include a straight vertical incline”). HitchDoc’s proposed construction (“sloping upwardly and outwardly in a direction that is neither vertical nor horizontal, such slope starting at the point where the top surface and the outer side surface of the bed meet”) seems to describe only figure 1.

I reject Meridian's proposed construction. In its rebuttal brief, Meridian complains that HitchDoc's proposed construction "requires not only the use of additional, extraneous claim limitations, but also substitution of easily understood claim terms with other terms." Doc. No. 37 at 19. Ironically, that describes Meridian's proposed construction. The claim language states, rather plainly, that the guide plates incline upwardly and outwardly from the perimeter edge of the bed. Meridian's proposed construction eliminates the relatively-simple term "incline," adds a confusing statement about the horizontal plane of the bed and eliminates the clear statement that incline starts at the perimeter edge of the bed. Moreover, nowhere in Meridian's argument, much of which is quoted above, does it offer a valid rationale for its proposed construction. At best, it recognizes that during prosecution, the Board ultimately distinguished the '551 patent because the guide plates in the '551 patent extend out beyond the perimeter edge while those in the Fitch do not. However, this fact, which arises from "third-level" evidence, is not sufficient to substantiate Meridian's proposed construction. I find that its proposed construction has no support in the claim, the broader patent or even in the prosecution history. As such, it is rejected.

HitchDoc's proposed construction is significantly better, but not perfect. HitchDoc starts its proposed construction by replacing "incline" with "slope." HitchDoc is correct that the use of "slope" is supported by the repeated use of that word in the patent. The fact that the specification repeatedly uses the word slope to explain the incline is relevant to the appropriate construction. I also agree with HitchDoc that the patent history forecloses Meridian's proposed construction. Specifically, as detailed above, the terms "inclining," "from the bed" and "outwardly from the edge" were all added to overcome the Roth and Fitch art. Meridian is constrained by those prior concessions, which were critical to the issuance of the '551 patent.

I also find this an instance in which the definition of incline, as cited above, becomes relevant even though it derives from extrinsic evidence. Accordingly, I find appropriate the definition cited by HitchDoc that incline is a deviation that is neither vertical nor horizontal, and that slope and incline are synonyms alternately used to define each other. *See* Doc. No. 35 at 16. I therefore adopt the first portion of HitchDoc’s proposed construction, “sloping upwardly and outwardly in a direction that is neither vertical nor horizontal.” However, I have previously found that the phrase “perimeter edge” needs no additional construction. Thus, the final construction will be “sloping upwardly and outwardly in a direction that is neither vertical nor horizontal, from the perimeter edge of the bed to facilitate centering of the box on the bed.”⁶

E. Lock Bars

Plaintiff’s Construction of “lock bars on the bed.”	The lock bars are positioned near the bed.
Defendant’s Construction of “lock bars on the bed.”	Lock bars in physical contact with and supported by the bed.

1. The parties’ arguments

The parties’ dispute the proper construction of the word “on.” Meridian states:

⁶ Meridian cites numerous cases to argue that HitchDoc’s proposed construction, which I have largely adopted, is merely a preferred embodiment and that adopting that construction would incorporate an unintended limitation into the claim. *See, e.g., Honeywell Int’l, Inc. v. IIT Indus., Inc.*, 452 F.3d 1312, 1316 (Fed. Cir. 2006), *Vapor Point LLC v. Moorhead*, 2013 WL 11275459, at *4 (S.D. Tex. Dec. 18, 2013), *TomTom, Inc. v. Adolph*, 790 F.3d 1315, 1328 (Fed. Cir. 2015), and *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 863 (Fed. Cir. 2004). I find, however, that the limitation set forth in my construction is contemplated by the claim. As such, I reject Meridian’s argument.

The phrase “lock bars on the bed” was not given a special definition in the ‘551 Patent and no scope was surrendered during the prosecution of the ‘551 Patent. . . . These lock bars 36 are secured in place over the top of the flange of the seed box 18. As noted in the ‘551 Patent, the lock system is associated with the guide plates 22.” *Id.* at col. 3, ll. 4-6.) The guide plates themselves are described and claimed as part of the bed. (*Id.* at col. 2, ll. 52-54.) (“The bed 14 of the trailer 10 is provided with a plurality of upwardly and outwardly extending guide plates 22”); (*Id.* at claim 1) (“the bed having guide plates”) But otherwise, it is clear that the lock bars themselves are not in the same planar surface as the bed 14 and do not contact the bed 14, except as the bed includes the guide plates 22. Meridian’s position that the lock bars are positioned near the bed is consistent with the plain and ordinary meaning of the word “on,” which is reflected in the dictionary definition as “a function word to indicate contiguity or dependence; esp. (2) location closely adjoining something or location very near some point of a narrowly extended area” or “a function word to indicate position with regard to a place, direction, or time; esp. (2) position near a specified part of something.” (Johnson Dec., Ex. 15.) The lock bars are simply on the bed, or, if any construction is necessary beyond the plain and ordinary meaning of these terms, the lock bars are positioned near the bed.

Doc. No. 31 at 28-29. HitchDoc replies:

In support of its construction of “lock bars on the bed,” HitchDoc cites the first-listed definition of “on” in three separate dictionaries: Merriam-Webster, <http://www.merriam-webster.com/dictionary/on>, (“used as a function word to indicate position in contact with and supported by the top surface of”). . . . In determining the meaning of “on,” the Court must rely on the dictionary definition of “on” that is applicable in the context of the claim language. *Felix v. American Honda Co.*, 562 F.3d 1167, 1178-79 (Fed. Cir. 2009). The dictionary definitions of “on” cited by HitchDoc are all applicable to “on” as used in claim 3. The definitions cited by Meridian relate to the use of “on” in contexts unrelated to the disputed claim language. . . .

Doc. No. 30 at 25-27. Accordingly, “HitchDoc contends that the language of claim 3 requires the claimed lock bars be in contact with and supported by the bed . . .” *Id.* at 27.

Meridian disagrees, stating:

HitchDoc proposes that the clause “lock bars on the bed” be redefined to require that the “lock bars [be] in physical contact with and supported by the bed.” (ECF No. 30, at 23.) This nonsensical proposed definition adds unnecessary limitations such as the requirement that the lock bars be in physical contact with the bed and be supported by the bed. These limitations are not required by the claim language. Here the word “on” has been replaced by seven words: “in physical contact with and supported by.” Again, HitchDoc attempts to add extraneous elements which are not actually in the claim through interpretation, which is prohibited.

Doc. No. 37 at 24-25. Meridian goes onto make both a logic-based and dictionary-based argument that “on” has multiple meanings, with only some requiring physical contact between two objects. Citing the 551 patent’s diagrams, Meridian also argues that “HitchDoc’s proposed construction would actually exclude every embodiment shown in the ’551 patent. Any construction which excludes the preferred embodiment is generally incorrect.” *Id.* at 27.

2. Analysis and Final Construction

Meridian contends that “lock bars on the bed” should be construed to mean “the lock bars are positioned near the bed,” while HitchDoc argues that the proper construction is “lock bars in physical contact with and supported by the bed.”

In its open brief, Meridian cited Dr. Seuss and argued that the constructions at issue in this case are as simple as “I mean what I said and I said what I meant.”⁷ However, as Judge Bennett has observed, even defining seemingly obvious claims can

⁷ Doc. No. 31 at 4 (citing *Horton Hatches the Egg*).

become bizarre in a patent construction case. *See Serverside Grp. Ltd. v. Tactical 8 Techs., L.L.C.*, 927 F. Supp. 2d 623, 629 (N.D. Iowa 2013) (comparing claim construction to an episode of *The Big Bang Theory* television show in which a character defines a heart-attack-like event as an event that is like a heart attack). In a similar vein, both parties make obvious arguments in favor of their preferred construction of “on,” while at the same time disregarding equally obvious explanations from the opposing party.

In common usage, “on” has numerous meanings (*e.g.*, “the light is on,” “I am on vacation,” “the stain is on my shirt,” “the train is on the tracks” and “the decal is on the truck”). In this case, HitchDoc argues that “on” must mean attached to with direct physical contact, as in the “stain on the shirt.” Meanwhile, Meridian’s construction is closer to the decal “on” the truck, as common usage may refer to the decal being “on” the truck even if it is merely on the truck’s trailer, or on the truck’s bumper, or physically placed on the truck. Both parties cite to dictionary definitions of “on,” and both sides establish that their preferred definition of “on” is a viable definition of “on” (attached to and being contiguous with, respectively).

However, neither party cites to the claim itself, the most important type of evidence, for the appropriate definition. Likewise, HitchDoc has no argument based in the specification of the patent that “on” must mean “attached to.” However, as noted above, Meridian points to the figures included in the patent:

As noted in the ‘551 Patent, the lock system is associated with the guide plates 22.” *Id.* at col. 3, ll. 4-6.) The guide plates themselves are described and claimed as part of the bed. (*Id.* at col. 2, ll. 52-54.) (“The bed 14 of the trailer 10 is provided with a plurality of upwardly and outwardly extending guide plates 22”); (*Id.* at claim 1) (“the bed having guide plates”) But otherwise, it is clear that the lock bars themselves are not in the same planar surface as the bed 14 and do not contact the bed 14, except as the bed includes the guide plates 22.

Doc. No. 31 at 28-29.

Additionally, HitchDoc’s preferred construction would include a limitation not contemplated by the claim – that the lock bar be attached to the bed. For those reasons, I reject its proposed construction. However, it is obvious that the lockbar must be near the bed. Accordingly, I am persuaded that a hybrid definition, incorporating both alternatives, is what is contemplated by the claim when considered in light of the specifications and the embodiments that discuss, and seem to show, the lock bar attached to the guide plates. Accordingly, I find that the phrase “lock bars on the bed” should be construed as “lock bars attached to or near the bed.”

F. Overlappingly Engage

Plaintiff’s Construction of “to overlappingly engage the flange of the seed box.”	The lock bar overlappingly contacts the flange of the seed box.
Defendant’s Construction of “to overlappingly engage the flange of the seed box.”	To overlappingly interlock with the flange of the seed box.

1. The parties’ arguments

The parties’ final construction dispute also regards the lock bars discussed above.

Meridian argues:

That the lock bars must be positioned near the bed (as bed includes its guide plates), only makes sense because the purpose of the lock bar is to overlappingly engage the flange of the seed box to secure the seed box to the bed. (‘551 Patent, ECF No. 2-1, claim 3.) . . . [I]t appears the issue between the parties is the definition of the term “engage.” This term should have its plain and ordinary meaning consistent with how it is used in the ‘551 Patent. For example, the dictionary from the time defines engage as “to come into contact or interlock with.” (Johnson Dec., Ex. 16.) Of these two alternate definitions, only the first is consistent with how “engage” is

used in the '551 Patent. As discussed in the '551 Patent, the lock bars “extend over the perimeter flange 20 of the seed box 18, as seen in FIG. 2, so as to secure the box 18 to the bed 14.” ('551 Patent, ECF No. 2-1, col. 3, ll. 38-40.)

However, HitchDoc proposes that the word “engage” be interpreted according to the second alternative definition of “engage” so as to require the lock bars to somehow interlock with the seed box. This definition, while consistent with an alternative definition of “engage” as provided by dictionaries, is inconsistent with how the lock bars of the '551 Patent engage the seed box. There is never a mention of the lock bars interlocking with the seed box in the '551 Patent. Generally, when a proposed construction excludes the embodiments of the invention as described and shown in the specification, that construction is improper. *See SynQor, Inc. v. Artesyn Technologies, Inc.*, 709 F.3d 1365, 1378-79 (Fed. Cir. 2013) (“A claim construction that excludes the preferred embodiment is rarely, if ever, correct and would require highly persuasive evidentiary support.”) (internal citations omitted.) Thus, the claim terms “to overlappingly engage the flange of the seed box” should be given their plain and ordinary meaning, consistent with the '551 Patent, and, if additional construction is deemed necessary, should be construed as “to overlappingly contact the flange of the seed box.”

Doc. No. 31 at 29-30. HitchDoc replies:

In support of its construction of “to overlappingly engage the flange of the seed box,” HitchDoc cites two dictionary definitions of “engage” stating that “engage” means to interlock. Merriam-Webster, <http://www.merriam-webster.com/dictionary/engage>, (“to come together and interlock”); American Heritage, <https://ahdictionary.com/word/search.html?q=engage>, (“to interlock or cause to interlock; mesh”). Meridian states that “engage” should have its plain and ordinary meaning, as reflected in the definition “to come into contact or interlock with.” (Doc. 24 at 28 (citing Webster’s Third).) Meridian’s proposed definition is followed by the example of: “the teeth of one gear wheel engaging those of another to transmit power.” Webster’s Third, at 751. Moreover, in the context of machinery, Webster’s Third defines engage “to be or become in gear . . . : interlock and interact.” *Id.* Accordingly, the parties agree that the phrase “to overlappingly engage” at

least requires the lock bars to come into contact with the flange of the seed box, but disagree on whether the phrase requires the lock bars to interlock with the flange. The various definitions cited by the parties establish, however, that when “engage” is used in the context of two pieces of machinery coming together, it means to interlock and should be given that construction in claim 3.

In sum, HitchDoc proposes that claim 3 be construed to state: “The improved trailer of claim 1 further comprising lock bars in physical contact with and supported by the bed, to overlappingly interlock with the flange of the seed box to secure the box to the bed.”

Doc. No. 30 at 27-28. Meridian replies that the word engage is plain on its face and making it synonymous with “interlock” would unnecessarily narrow the patent. Meridian also cites another patent, U.S. Patent No. 8,240,494 (the Mohns patent) (Doc. No. 37-6), which uses the term engage to mean to contact in the context of the exact type of seed boxes used on the trailers at issue in this case. Doc. No. 37 at 26-27. HitchDoc again responds by citing to alternate dictionary definitions. Doc. No. 35 at 24.

2. Analysis and Final Construction

I find that HitchDoc’s proposed construction would again add a limitation not contemplated by the patent claim. Both parties’ constructions are supported by extrinsic dictionary definitions. However, nothing about the claim itself supports HitchDoc’s contention that when the lockbar engages with the flange it means the lockbar interlocks with the flange. Rather, the patent’s claims and specifications indicate that overlap means just that, to come down onto, or to have contact with.

Meridian’s proposed construction (“the lock bar overlappingly contacts the flange of the seed box”) does not limit the claim nor preclude the possibility of interlocking. Rather, it simply is a way to understand and explain the claim. *See Scripps Clinic*, 927 F.2d at 1580. Additionally, I agree with Meridian that a construction that precludes the

preferred embodiment is rarely correct. *See Adams Respiratory Therapeutics, Inc. v. Perrigo Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010). In this case, the preferred embodiment in the patent (Doc. No. 30-2 at 4-5) describes a lockbar that contacts the flange, not a lockbar that interlocks with the flange. HitchDoc’s interlock language would preclude an embodiment of mere contact. Because such a construction is rarely correct, I will not adopt it. Accordingly, I will adopt Meridian’s proposed construction: “The lock bar overlappingly contacts the flange of the seed box.”

V. CONCLUSION

For the reasons set forth herein, the court’s final constructions of the disputed terms and phrases are set out below:

Term/Phrase	Court’s Construction
Bed	Ordinary meaning.
Perimeter Edge	Ordinary meaning.
Guide Plates	The plates that guide the seed boxes into position onto the bed.

Inclining Upwardly and Outwardly from the Perimeter Edge of the Bed to Facilitate Centering of the Box on the Bed	Sloping upwardly and outwardly in a direction that is neither vertical nor horizontal, from the perimeter edge of the bed to facilitate centering of the box on the bed.
Lock Bars on the Bed	Lock bars attached to or near the bed.
To Overlappingly Engage the Flange of the Seed Box	The lock bar overlappingly contacts the flange of the seed box.

In accordance with the telephonic status conference conducted May 15, 2017, the parties shall confer about new deadlines and a new trial-ready date. On or before **June 16, 2017**, the parties shall file a joint report concerning proposed new dates. Upon review of the parties' report, I will determine whether another telephonic status conference is necessary.

IT IS SO ORDERED.

DATED this 9th day of June, 2017.

Leonard T. Strand, Chief Judge