NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition
is not citable as precedent. It is a public record.

United States Court of Appeals for the Federal Circuit

05-1269, -1270

JON E. KINZENBAW and KINZE MANUFACTURING, INC.,

Plaintiff/Counterclaim Defendants-Appellants,

and

JAMES J. HILL and EMRICH & DITHMAR,

Counterclaim Defendants,

v.

CASE LLC (formerly known as Case Corporation,
now known as CNH America LLC) and NEW HOLLAND NORTH AMERICA, INC.
(now known as CNH America LLC),

Defendants / Counterclaimants-Cross Appellants.

DECIDED: April 26, 2006

Before SCHALL, BRYSON, and DYK, Circuit Judges.

SCHALL, Circuit Judge.

DECISION

Jon E. Kinzenbaw and Kinze Manufacturing, Inc. (collectively "Kinze") appeal the judgment of the United States District Court for the Northern District of Iowa in

Kinzenbaw v. Case, LLC, No. 01-CV-133, slip. op. (N.D. Iowa Feb. 4, 2005). Following a jury trial, the district court entered judgment of non-infringement in favor of Case, LLC and New Holland North America, Inc. (collectively "Case") on Kinze's claim that Case infringed claims 1, 2, 3, 9, and 22 of U.S. Patent No. 4,721,168 (the "'168 patent"). For its part, Case cross-appeals the district court's denial of its motion for judgment as a matter of law ("JMOL") that claims 1 and 22 of the '168 patent, the only independent claims of the patent, are indefinite. We affirm.

DISCUSSION

I.

The '168 patent relates to a large agricultural planter. '168 patent, col. 1, ll. 7-10. When in use, it is pulled behind a tractor. To switch the planter from its use to its transport position, the patent describes the lifting and rotating of the entire lift frame 90 degrees so that the width of the implement is diminished, thereby facilitating transport.

Independent claims 1 and 22 of the '168 patent read as follows:

> 1. An agricultural implement adapted to be pulled by a tractor with a hitch and convertible between a use position and a transport position without unhitching from the tractor hitch, comprising: a carrier frame including a plurality of ground support wheels; draft tongue means connecting said carrier frame to the tractor hitch for permitting pivotal movement between said tractor and said implement about a first vertical hitch axis; lift frame means including a lift frame and plurality of work units spaced along said lift frame, said lift frame including at least an integral center frame section extending to either side of the centerline of the implement in the use position; mounting means for mounting said lift frame such that said center frame section thereof is rotatable about a second vertical axis of rotation; powered lift linkage means connecting said lift frame to said carrier frame for lifting said lift frame and said work units above said carrier frame to a raised position wherein all of said units are elevated above said support wheels; and power swing

> means for rotating said lift frame in said raised position about said second vertical axis between said use position and said transport position in which said lift frame is elongated in the direction of travel; and characterized in that the said second vertical axis of rotation is located such that the weight of said lift frame means is substantially uniformly distributed to either side thereof in the direction of elongation of said lift frame means.
>
> 22. An agricultural implement adapted to be pulled by a tractor with a hitch and convertible between a use position and a transport position without unhitching from the tractor, comprising: a carrier frame including a plurality of ground support wheels; draft tongue means connected to said carrier frame for connecting said carrier frame to the tractor hitch for permitting pivotal movement between said tractor and said implement about a hitch axis; lift frame means including a laterally elongated integral lift frame and plurality of ground-engaging work units spaced along said lift frame, said lift frame being extended in a direction transverse of the direction of travel of said tractor when said lift frame is in the use position; powered lift linkage means connecting said lift frame to said carrier frame for selectively lifting said lift frame and said work units to a first raised position wherein said work units are above the ground to permit said implement to turn and to a second raised position above said first raised position, wherein all of said work units are above said carrier frame and above said ground support wheels in said second raised position; and power swing means for rotating said lift frame in said second raised position about a vertical axis between said use position and said transport position in which said lift frame is elongated in the direction of travel and characterized in that said vertical axis of rotation of said lift frame is substantially on the center line of said implement and proximate the mid-point of said lift frame in its direction of elongation and is located forwardly of at least two of said ground support wheels of said carrier frame.

'168 patent, col. 18, l. 45-col. 19, l. 4; col. 21, l. 41-col. 22, l. 21 (emphasis added).

Case manufactures and sells large agricultural planters. As indicated above, Kinze sued Case for infringement of claims 1, 2, 3, 9, and 22 of the '168 patent. In its answer, Case counterclaimed for a declaratory judgment of noninfringement and

invalidity on the ground of indefiniteness with respect to all five claims. After the district court construed the pertinent limitations of the claims at issue, see Kinzebaw v. Case, LLC, 318 F. Supp. 2d 778 (N.D. Iowa 2005) ("Claim Construction Order"), the case proceeded to trial before a jury. After deliberating, the jury returned a verdict of noninfringement with respect to all five claims. However, the jury did not find the claims indefinite. In due course, the district court denied the parties' respective motions for JMOL and proceeded to enter judgment in favor of Case on Kinze's infringement claims and in favor of Kinze on Case's invalidity claim. Kinze's appeal and Case's cross-appeal followed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a).

II.

We consider Kinze's appeal first. On appeal, Kinze argues that the district court erred in construing three limitations of claim 1 of the '168 patent. According to Kinze, the district court's erroneous claim construction and eventual instructions to the jury amounted to harmful error, resulting in the jury's verdict of noninfringement with respect to the five asserted claims of the patent.[1] We note that Kinze does not challenge the jury's verdict under the district court's claim construction. Thus, claim construction is the only issue before us on the direct appeal.

[1] Kinze challenges the jury's verdict of noninfringement of claim 9 alleging that the district court erred by construing the claim to be in means-plus-function form. Case responds that the construction of claim 9 was not at issue in the Markman hearing and that Kinze made no objection to the jury instruction regarding this claim at trial. In its reply brief, Kinze was unable to point to anything in the record to dispute Case's contentions. Accordingly, we find that Kinze failed to preserve for appeal this challenge to the construction of claim 9.

The three limitations of claim 1 that are the focus of Kinze's appeal are the "draft tongue means" limitation, the "power lift linkage means" limitation, and the "power swing means" limitation. Pursuant to 35 U.S.C. § 112 ¶ 6,

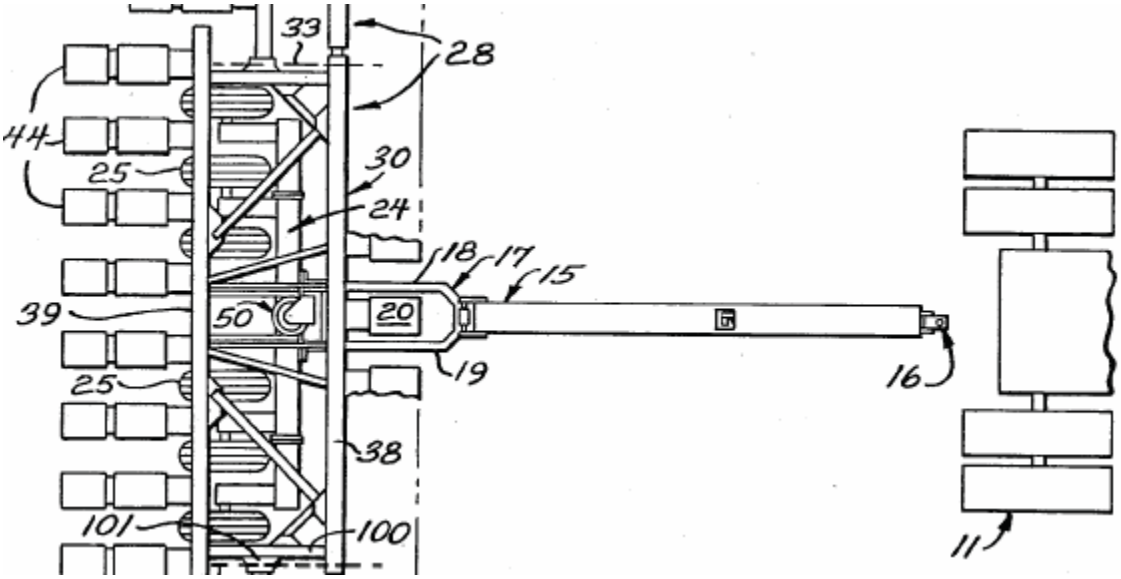
> [a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material or acts described in the specification and equivalents thereof.

We have stated that "[once] the court has concluded the claim limitation is a means-plus-function limitation, the court must identify the function of the limitation." Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1375 (Fed. Cir. 2003) (citing Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258 (Fed. Cir. 1999)). Next, the court "ascertains the corresponding structure in the written description that is necessary to perform that function." Id. (citing Micro Chem., 194 F.3d at 1258) (emphasis added); accord Omega Eng'g. Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed. Cir. 2003) ("[T]he structure must be necessary to perform the claimed function."). Lastly, "[s]tructure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." Altiris, 318 F.3d at 1375 (quoting B. Braun Med. v. Abbott Labs., 124 F.3d 1419 (Fed. Cir. 1997)). We turn now to the three claim limitations at issue.

A. draft tongue means

Claim 1 of the '168 patent provides: "draft tongue means connecting said carrier frame to the tractor hitch for permitting pivotal movement between said tractor and said implement about a first vertical hitch axis . . . ." '168 patent, col. 18, ll. 49-53 (emphasis

added). The district court held that "the functional language associated with the term 'means' in this clause is connecting the carrier frame to the tractor hitch and permitting pivotal movement between the tractor and the implement about a first vertical hitch axis." Claim Construction Order, 318 F. Supp. 2d at 789 (emphasis added). The court then determined that "the structures disclosed in the specification which are necessary to perform the connecting function are the telescoping hitch 15, the clevis 16 and the bifurcated rear section of the telescoping hitch 17." Id. at 791 (emphasis added). Next, the court identified the telescoping hitch 15 and the clevis 16, but not the bifurcated rear section of the telescoping hitch 17, as structures necessary to perform the pivoting function. Id. The magnified portion of Figure 1 below provides a helpful illustration of the structure at issue.



'168 patent, Fig. 1.

Kinze argues that "connecting said carrier frame to the tractor hitch" is a structural limitation, not a functional limitation. Kinze contends that "the connecting phrase merely provides a structural orientation for the structure that corresponds to the

means for permitting pivotal movement." Appellant Br. at 33. We agree. The only function in the claim for 112 ¶ 6 purposes is "permitting pivotal movement between said tractor and said implement."[2]

Case contends that even if "connecting" is not a function, the court's claim construction error is harmless because the bifurcated rear section of the telescoping hitch 17 is necessary to carry out the function of "permitting pivotal movement between said tractor and said implement." Case explains that without the connection created by the bifurcated rear section, the carrier frame would not be coupled to the tractor hitch, thus preventing such relative pivotal movement. In other words, Case argues that, even if the district court did err by construing the function of the draft tongue means as including both connecting and pivoting, the error was harmless because, contrary to the court's construction, the bifurcated rear section of the telescoping hitch 17 is structure necessary for performing the pivoting function. Consequently, as the district court charged the jury, the bifurcated rear section of the telescoping hitch 17, along with the hitch 15 and the clevis 16, are structure necessary for performing the function associated with the draft tongue means limitation. See Claim Construction Order, 318 F. Supp. 2d at 791. Having considered Kinze's arguments to the contrary, we agree with Case. We therefore find no error in the district court's charge to the jury with respect to the draft tongue means limitation of claim 1.

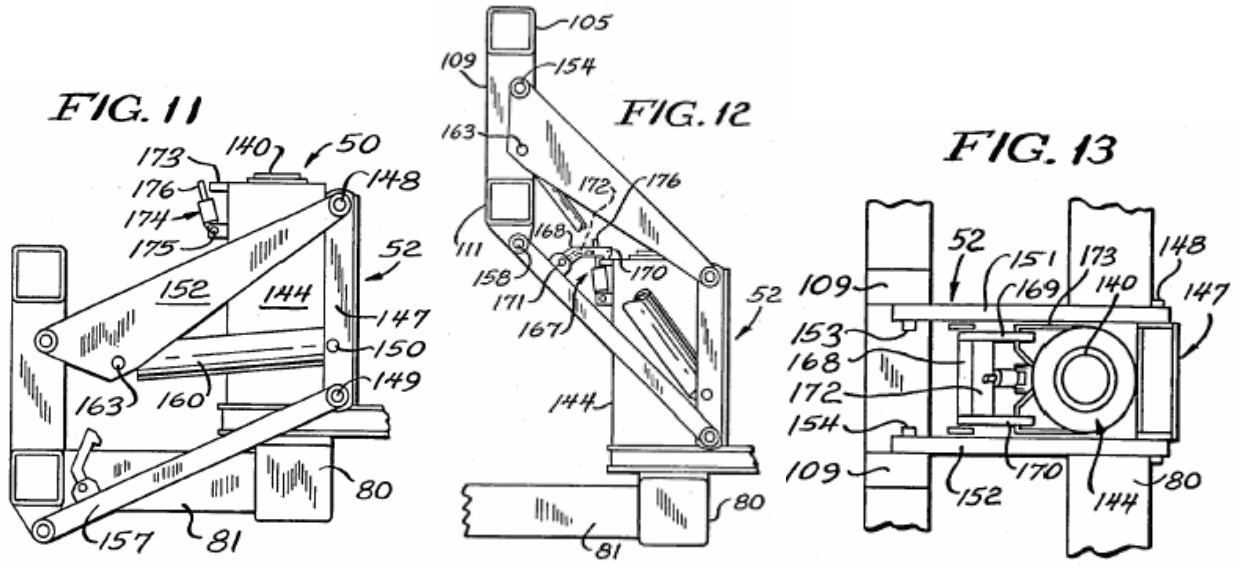
[2] In other words, the claim limitation could be reorganized as follows while keeping the same meaning: draft tongue means, that connects said carrier frame to the tractor hitch, for permitting pivotal movement between said tractor and said implement about a first vertical hitch axis.

B. power lift linkage means

Claim 1 of the '168 patent further provides: "powered lift linkage means connecting said lift frame to said carrier frame for lifting said lift frame and said work units above said carrier frame to a raised position wherein all of said units are elevated above said support wheels . . . ." '168 patent, col. 18, ll. 59-64 (emphasis added). As in the case of the draft tongue means limitation, the district court construed this limitation to have two functions: connecting the lift frame to the carrier frame and lifting the lift frame and work units. Claim Construction Order, 318 F. Supp. 2d at 795. For the same reason that the district court erred in construing "connecting said carrier frame to the tractor hitch" to be a function of the draft tongue means, the court erred in construing "connecting the lift frame to the carrier frame" to be a function of the powered lift linkage means. Again, however, the error was harmless. The reason is that the structure determined by the district court to be necessary for performance of the erroneous "connecting" function was also determined to be necessary for performance of the lifting function. The structure the district court found necessary for performing both functions included the forward bracket on the bell housing 147, the center struts 109 of the arched rear mounting bar of the lift frame, and the horizontal mounting section 111 of the arched rear mounting bar. Id. at 796.

It is not disputed that the "powered lift linkage means" limitation is in means-plus-function form and that lifting is a function. Kinze contends that the district court erred when it found the structure corresponding to the lifting function to include items 109, 111, and 147. See id. Figures 11, 12, and 13 are reproduced below and depict the structures at issue. Figure 11 is a side view of the lift linkage in the use position, Figure

12 is a similar side view with the lift frame in the raised position, while Figure 13 is a fragmentary top view of the main lift mechanism shown in Figure 12.



'168 patent, Figs. 11-13. Kinze asserts that the only structures necessary to perform the lifting function are the four bars of the linkage, consisting of the upper and lower links 152 and 157, which form two of the bars, and the rigid lift frame (28 on Figure 1) and rigid carrier frame (24 on Figure 1), which form the other two bars. Kinze argues that these links can be attached to the lift frame at any point because the lift frame is all one rigid and integral welded structure, as is the carrier frame. Kinze further argues that the four-bar linkage is a conventional and well-known mechanical device for performing a lifting function, which can be connected to any part of the lift frame and to any part of the carrier frame. Appellant Br. at 36.

Case responds that "[w]ithout the center struts 109, horizontal mounting section 111 and forward bracket 147 of the disclosed four bar linkage, the powered lift linkage assembly 52 could not possibly connect the lift frame to the carrier frame or lift the lift frame from a lower position to a raised position." Cross-appellant Br. at 56. Case

continues, “In fact, absent these items 109, 111, and 147, the remaining structure of the linkage would lose its mechanical integrity and be incapable of performing any function.” Id.

We agree with Case that items 109, 111, and 147 are necessary corresponding structure to the lifting function. Kinze is correct that one could weld the linkage bars 152 and 157 directly to the lift frame while maintaining the lifting function and mechanical integrity. However, this is more of a doctrine of equivalents argument than a claim construction argument. The specification discloses specific components (structure) that are essential to the lifting function, and such disclosures must be given due consideration. Because we find that items 109, 111, and 147 were properly found to be necessary corresponding structure to the lifting function, the district court’s error in construing “connecting the lift frame to the carrier frame” to be a functional, rather than a structural, limitation was harmless. Thus, the instruction ultimately given to the jury concerning this limitation, see Claim Construction Order, 318 F. Supp. 2d at 796, was correct.

C. power swing means

Finally, claim 1 of the ‘168 patent provides: “power swing means for rotating said lift frame in said raised position about said second vertical axis between said use position and said transport position in which said lift frame is elongated in the direction of travel . . . .” (emphasis added). ‘168 patent, col. 18, ll. 64-68. The parties agree that the “power swing means” limitation is in means-plus function form and that the function recited is “rotating said lift frame in said raised position about said second vertical axis between said use position and said transport position.” The parties dispute what

structure in the specification corresponds to the claimed function. Figure 19 provides a helpful illustration of the use position while Figure 20 depicts the transportation position of this structure.

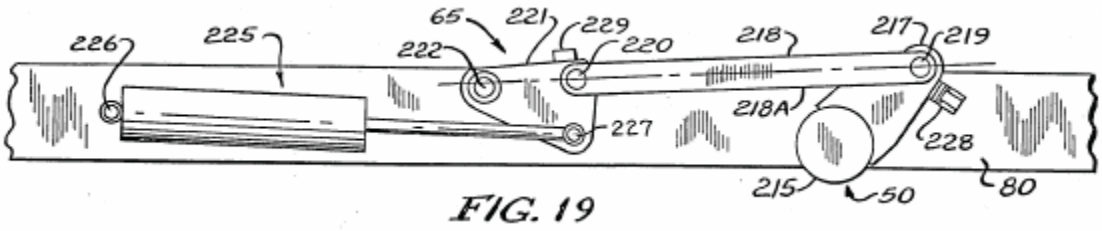


FIG. 19

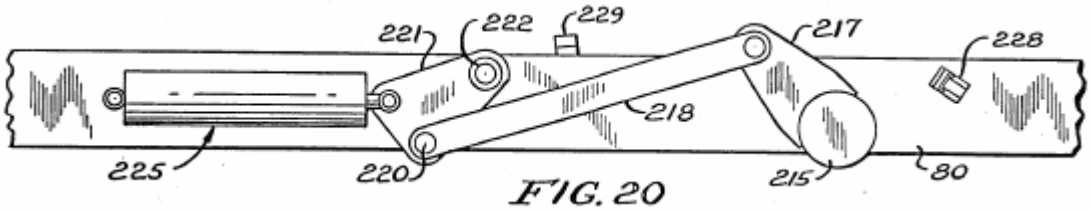


FIG. 20

As demonstrated by Figure 19, when the rod of the hydraulic cylinder 225 is fully extended, the lift frame is perpendicular to the center line of the planter, as depicted in Figure 1 below. When the hydraulic cylinder 225 retracts the rod to the position shown in Figure 20, the link 221 rotates clockwise around the pivot 222, which causes the link 218 and crank arm 217 to rotate the circular plate 215 counterclockwise, as shown in Figure 20. When the plate 215 rotates from the position in Figure 19 to the position in Figure 20, the lift frame 28 rotates about the center post from the use position (perpendicular) to the transport position (parallel to the center line), as depicted in Figure 4 below.

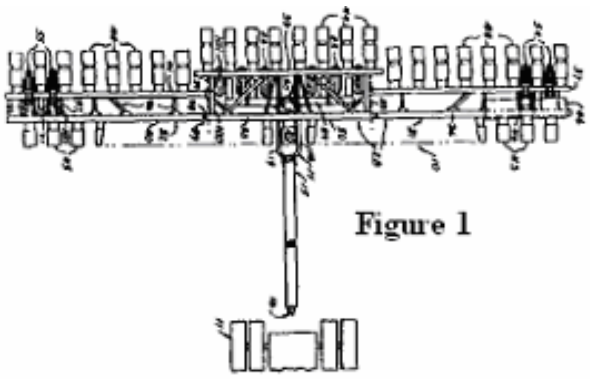


Figure 1

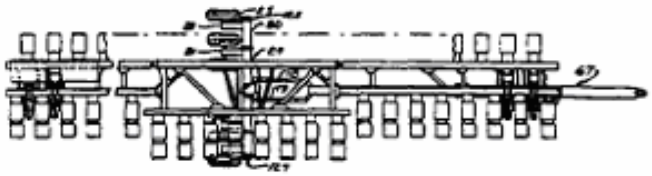


Figure 4

The district court found the following structures to be necessary to perform the claimed function:

> the power swing linkage assembly 65 which includes a circular plate 215, a crank arm 217 welded to the circular plate 215, a connecting link 218 pivotally connected at one end 219 to the crank arm 217 and pivotally connected at the other end 220 to a link 221. Link 221 is pivotally mounted at 222 to the carrier frame. The structure further includes a hydraulic cylinder 225 with its butt end pivotally connected at 226 to the carrier frame for horizontal movement about a vertical axis with its rod end pivotally connected at 227 to the link 221. Accordingly, the court concludes the power swing means limitation covers each of these structures and their equivalents.

Claim Construction Order, 318 F. Supp. 2d at 798.

Kinze contends that the district court committed an error of claim construction by including intermediate links 218 and 221 as structure for the power swing means. Kinze argues that these linkages perform the over-center and deceleration functions, as opposed to the function recited in the claim. Kinze states, "The mere fact that they are activated during the swing mechanism is no [ ] reason to include them in the swinging function." Appellant Br. at 38.

Case responds that the intermediate links 218 and 221 are integral to the operation of the swing linkage assembly. Case argues that without these links, the mechanical connection between the hydraulic cylinder 225 and the plate 215 would be severed, preventing the cylinder from moving the plate and rotating the lift frame. Moreover, Case notes that it is unimportant that the intermediate links 218 and 221 perform additional operations of deceleration over-centering, as the relevant inquiry is whether they are necessary for rotating the lift frame.

We agree with Case. Because the intermediate links 218 and 221 are necessary to perform the function of "rotating said lift frame in said raised position about said second vertical axis between said use position and said transport position," the district court was correct to construe this limitation to require such intermediate links.

III.

Case cross-appeals the district court's denial of its motion for JMOL with respect to its claim of invalidity by reason of indefiniteness. JMOL against a party is appropriate when "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. Rule 50(a)(1).

"In ruling on a claim of patent indefiniteness, a court must determine whether those skilled in the art would understand what is claimed when the claim is read in light of the specification." Bancorp Servs., L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1371 (Fed. Cir. 2004); Exxon, 265 F.3d at 1375. "A claim is indefinite if its legal scope is not clear enough that a person of ordinary skill in the art could determine whether a

particular composition infringes or not." Geneva Pharm., Inc. v. Glaxosmithkline PLC, 349 F.3d 1373, 1384 (Fed. Cir. 2003).

Case argues that it met its burden to show by clear and convincing evidence that claims 1 and 22 of the '168 patent are indefinite. Case challenges the final limitation in claim 1: "characterized in that the said second vertical axis of rotation is located such that the weight of said lift frame means is substantially uniformly distributed to either side thereof in the direction of elongation of said lift frame means. '168 patent, col. 18, l. 68-col. 19, l. 4 (emphasis added). Case also challenges a limitation in claim 22 relating to the lift frame means: "characterized in that said vertical axis of rotation of said lift frame is substantially on the center line of said implement and proximate the mid-point of said lift frame in its direction of elongation . . . ." '168 patent, col. 22, ll. 16-19 (emphasis added). Case urges that use of the words "substantially" and "proximate" renders claim 22 indefinite.

While construing the term "substantially constant wall thickness," Verve v. Crane Cams, Inc., 311 F.3d 1116, 1119-20 (Fed. Cir. 2002), we explained that "[t]he question is not whether the word 'substantially' has a fixed meaning as applied to 'constant wall thickness,' but how the phrase would be understood by persons experienced in this field of mechanics, upon reading the patent documents." We wrote that "[e]xpressions such as 'substantially' are used in patent documents when warranted by the nature of the invention, in order to accommodate the minor variations that may be appropriate to secure the invention" and "indeed may be necessary in order to provide the inventor with the benefit of his invention." Id. at 1120. Likewise, in Ecolab Inc. v. Envirochem, Inc., 264 F.3d 1358, 1367 (Fed. Cir. 2001), the court held that "the use of the term

'substantially' to modify the term 'uniform' d[id] not render this phrase so unclear such that there is no means by which to ascertain the claim scope."

The district court heard testimony from Mr. Kinzenbaw that substantially equal weight means that the weight can vary plus or minus 10 to 15 percent right or left. The court also heard testimony from Mr. Deckler, Kinze's technical expert who has been in the agricultural equipment field since 1960, that a 10% variation is not significant and that most engineers would agree that 10% to 15% would be the outer limit of how far the pivot could be offset while still conforming to the language of the claim specifying "substantially uniform" weight distribution and "proximate the centerline." Also, Kinze points to sections of the specification showing that an objective of the invention is to have substantially equal weight distribution about the centerline in both the transport and use positions and that the claimed planters could be configured in many different ways with the presence or absence of heavy equipment that would alter the weight distribution. See, e.g., '168 patent, col. 4, ll. 4-16, ll. 45-53, col. 18, ll. 17-21, 32-35.

Case argues that the opinions of Kinzenbaw and Deckler were conclusory and biased, and that neither witness could identify a single published document supporting their 10 to 15 percent leeway theories. Case also argues that "substantially" and "proximate" are words of degree and that no standard for measuring the degrees is provided in the specification. Finally, Case adds that the words of degree are not as precise as the subject matter permits in the farm machinery art.

It appears that in addition to reviewing the '168 patent and the documentary evidence, the district court made credibility determinations after hearing live testimony. Furthermore, considering the case law discussed above, we think Case fell far short of

proving by clear and convincing evidence that the disputed claim limitations are indefinite. Accordingly, the district court did not err by denying Case's motion for JMOL with respect to indefiniteness of the disputed claim limitations.

For the foregoing reasons, we affirm the district court's judgments of noninfringement and non-invalidity.

Each party shall bear its own costs.