

# United States Court of Appeals for the Federal Circuit

03-1606

MARLANE C. SEARFOSS and TIMOTHY K. SEARFOSS,

Plaintiffs-Appellants,

v.

PIONEER CONSOLIDATED CORPORATION,

Defendant-Appellee.

John A. Artz, Artz & Artz, of Southfield, Michigan, argued for plaintiffs-appellants. Of counsel were John S. Artz and Robert P. Renke.

Thomas E. Bejin, Young & Basile, P.C., of Troy, Michigan, argued for defendant-appellee. Of counsel on the brief was Thomas N. Young.

Appealed from: United States District Court for the Eastern District of Michigan

Judge Robert H. Cleland

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DECIDED: July 6, 2004

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Before NEWMAN, MICHEL, and SCHALL, Circuit Judges.

MICHEL, Circuit Judge.

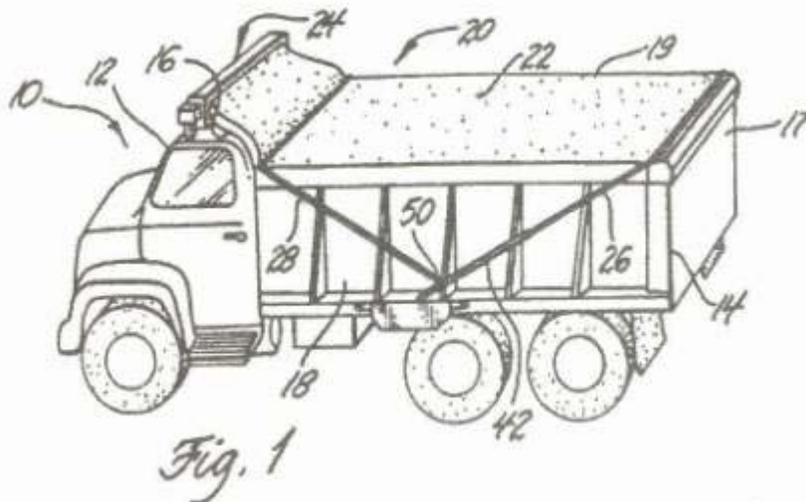
Plaintiffs-Appellants Marlane and Timothy Searfoss (collectively “Searfoss”) appeal from an order granting summary judgment of non-infringement to Pioneer Consolidated Corporation (“Pioneer”) based on a finding that no reasonable jury could find that Pioneer’s accused products infringe the claims of United States Patent No. 5,031,955 (“the ’955 patent”) under the doctrine of equivalents, the sole type of infringement asserted. Searfoss v. Pioneer Consol. Corp., No. 99-CV-76394-DT (E.D. Mich. Aug. 6, 2003) (“Summary Judgment Order”). Because we find that the district court did not err in either its construction of the disputed claim terms or its resulting finding of non-infringement as a matter of law under the doctrine of equivalents, we affirm.

## BACKGROUND

On June 4, 1999, Searfoss filed suit against Pioneer for the alleged infringement of the '955 patent through its sale of moveable cover systems for truck beds. The '955 patent relates to:

A truck cover is provided [that] includes a flexible cover for selectively covering and uncovering the load bed of a truck. A winding assembly is mounted on the front end of the load bed and includes a reel for winding a flexible cover. A motor drives the reel through a worm drive. An extension assembly is provided which includes a pivoted rear bail connected to the rear and [sic] of the cover and a spring bias assembly which pivots the bail to the rear of the truck so as to extend the cover over the bed. A tension assembly is provided which utilizes a tension bail over the front of the cover having legs which are attached to the rear bail so the tension bail is lowered onto the front of the cover as the rear bail unwinds the cover from the winding assembly. Each leg of the rear bail is secured to the load bed through an offset pivot through which bias forces are transmitted when the cover is wound on the winding assembly to reduce strain on the winding assembly motor.

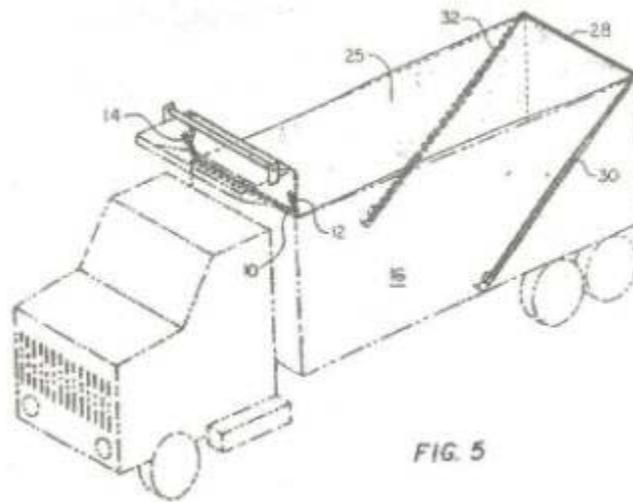
'955 patent, Abstract. The claimed invention of the '955 patent was aimed at solving two problems in the truck bed cover art: (1) ease of use and (2) a gap between the side of the truck bed and the cover proximate to the front of the truck (near the cab) that allowed wind to blow under the cover and disturb particles or items in the truck bed. The claimed invention sought to resolve these problems by providing a truck cover that may be "conveniently motor operated from the cab of a truck while simultaneously extending the cover over the truck bed and pressing down on the front of the cover proximate a winding assembly which winds up the cover at the front of the truck bed." *Id.* at col. 1, ll. 23-29. A diagram of a preferred embodiment is set out below:



Searfoss argues that Pioneer infringes claim 3 of the '955 patent, which reads:

A cover assembly for covering a vehicle load bed defined by first and second ends and first and second sides, said cover assembly comprising, in combination, a flexible cover; a winding assembly for winding and storing said cover so as to uncover said load bed, said winding assembly including a reel proximate said first load bed end and winding means for winding said cover on said reel; an extension assembly for extending said cover over said load bed, said extension assembly including an extension bail, said extension bail including a cover support section substantially extending across said load bed and first and second legs, each of said extension bail legs being connected to said cover support section and respectively extending downwardly to said first and second sides of said load bed, extension bail attachment means for attaching each of said extension bail legs to said load bed sides, and bias means for biasing said extension bail cover support section toward said second load bed end so as to extend said cover over said load bed; and a tension bail assembly for pressing downwardly on said cover proximate said first load bed end, said tension bail assembly including a center section substantially extending across said load bed and first and second legs, said first and second tension bail legs each having one end connected to said tension bail center section and another end respectively extending downwardly to said first and second sides of said load bed, and actuation means for connecting said tension bail to said extension assembly and applying a downward force through said tension bail center section to said cover, said actuation means including first and second pivot connections respectively between said first and second tension bail legs and a midpoint on said respective first and second extension bail legs so as to selectively apply said downward force on said cover proximate said load bed first end while said cover is extended over said load bed by said extension assembly by lowering said tension bail onto said cover while said cover is being extended over said load bed whereby said load bed is selectively covered by said extension assembly pulling said cover off said reel so as to extend said cover over said load bed toward said second load bed end while said tension bail assembly applies said downward force on said cover over said load bed proximate said first load bed end and said load bed is selectively uncovered by said winding assembly winding said cover onto said reel while said tension bail assembly downward force is substantially reduced on said cover proximate said first load bed end.

Id. at col. 6, l. 28 – col. 7, l. 8 (emphases added). Though Searfoss concedes that Pioneer does not infringe the '955 patent literally, Searfoss alleges infringement under the doctrine of equivalents. A diagram of the accused product is set out below:[\[1\]](#)



On September 13, 2002, the district court issued its Markman Order construing claim 3 of the '955 patent. *Searfoss v. Pioneer Consol. Corp.*, No. 99-CV-76394-DT (E.D. Mich. Sept. 13, 2002) (“Markman Order”). Though the district court construed each limitation of the claim, its written decision focused on the term “actuation means for connecting said tension bail to said extension assembly and applying a downward force through said tension bail center section to said cover.” The district court held the term to be a means-plus-function limitation under section 112(6), with two claimed functions: (1) to connect the tension bail and extension assembly; and (2) to apply a downward force through the tension bail to the cover. Markman Order at 6.

With respect to the first function, the parties debated whether the term “connecting” required a direct connection or could include a tangential connection, such as through the cover. Searfoss argued that an indirect connection is still a “connection” while Pioneer argued that “connect” requires a direct pivotal connection. In support of its contention, Searfoss cited to dictionary definitions of “connect.” The court held that, as used in claim 3, the term “connecting” requires a direct pivotal connection between the tension bail and the extension assembly, such that, in the context of claim 3, “connecting” is synonymous with “attaching.” Id. at 7. The court further held that the actuation means could not include the cover because one function of the actuation means is to apply downward force to the cover and a construction of actuation means to include cover would be “nonsensical.” Id. at 6-7.

With regard to the second function, Pioneer asserted that the downward force applied through the tension bail is substantially reduced as the cover is being wound onto the reel, and that to achieve this, a direct pivotal connection between the tension bail and the extension assembly is necessary to decrease the force upon rewinding. Searfoss argued that the downward force is nothing but gravity, and that no direct connection is required to achieve this downward force. Searfoss also argued that the reduction in force need not occur upon rewinding; instead, all that is required is that the force on the cover needs to be substantially reduced when the bed is in an uncovered state, as opposed to when the bed is covered. The district court held that, based on the language of the claim, a direct pivotal connection is necessary to perform the second function of the actuation means. Id. at 9. Though the district court agreed with Searfoss that gravity supplies the downward force (and noted that no other explanation was plausible), the district court held that because the actuation means is described in relation to its function of applying a downward force through the tension ball onto the cover, there must be some relation between the actuation means and the downward force. Id.

The court found further support for this interpretation in the final section of the claim (“said load bed is selectively uncovered by said winding assembly winding said cover onto said reel while said tension bail assembly downward force is substantially reduced on said cover proximate said first load bed end”) because it found the “winding . . . while” language to indicate that the downward force is substantially reduced at the same time the cover is winding back onto its reel. Id. The court found that the direct pivotal connections between the tension bail and the extension assembly are what makes this possible -- as the cover is wound onto the reel, the extension assembly is pulled toward the cover, simultaneously decreasing the downward force. Id. The court pointed to the specification, which states that “the extension assembly raises the tension bail assembly when the winding assembly retracts the cover by partially lifting the tension bail off the cover.” ’955 patent, col. 1, ll. 54-56.

On October 28, 2002, Pioneer moved for summary judgment of non-infringement. The court conducted a hearing on January 15, 2003, and issued its decision granting summary judgment of non-infringement on August 6, 2003. In its order granting summary judgment, the district court described Pioneer’s accused system. The Pioneer system operates with two U-shaped bows -- an extension arm

and a tension bail. Summary Judgment Order at 4. It has a U-shaped extension assembly which is attached at the ends of the side of the load bed; the center section extends across the load bed and is attached to the cover allowing it to pull the cover across the load bed. Id. The Pioneer system also has a U-shaped tension bail which applies a downward force on the cover. Id. Unlike the Roll-Rite System (the embodying product of the '955 patent), the legs of the Pioneer system's tension bail assembly are not attached to the legs of the extension assembly, and instead are attached on or near the winding assembly to the cab of the truck. Id.

In deciding the motion for summary judgment of non-infringement, the district court primarily addressed the "actuation means" limitation that it had previously construed in its claim construction decision.

As a threshold matter, the district court noted that both Searfoss and Pioneer argued that the district court erred in finding the limitation to be a means-plus-function limitation because the claim limitation recited sufficient structure to remove it from the purview of 35 U.S.C. § 112(6). The court declined to address this argument for two reasons: (1) neither party had filed a motion for reconsideration and (2) the parties conceded that the means-plus-function issue would not affect the pending summary judgment motion because the question of whether an indirect connect was equivalent to a direct connection would be the same whether equivalency is judged under section 112(6) or under the doctrine of equivalents. Id. at 9.

Addressing the merits of the equivalency challenge, the district court determined that "a reasonable jury could not find that the Pioneer System contains the equivalent of an 'actuation means,' with a structure 'connecting' the tension bail to the extension assembly" and that the difference between the two systems was "substantial as a matter of law." Id. at 10-13. The district court declined to address Searfoss' argument that the Pioneer System literally infringed the "whereby" clause of claim 3 of the '955 patent because it found that Pioneer did not infringe the "actuation means" limitation of claim 3 under the doctrine of equivalents. Id. at 14.

Searfoss appeals from the entry of summary judgment of non-infringement. We have

jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

This opinion follows the court's review of the record and consideration of the parties' oral argument, heard on May 7, 2004.

## DISCUSSION

We review de novo a district court's grant of summary judgment. Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998). Summary judgment is appropriate if, drawing all factual inferences in favor of the non-movant, he cannot show there is a genuine issue of material fact and the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986).

Analysis of infringement involves two steps. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 988 (Fed. Cir. 1999). First, the trial court determines the scope and meaning of the asserted claims. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372-74 (1996). The trial court's claim construction is an issue of law reviewed without deference. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). Second, the claims as construed by the court are compared limitation by limitation to the features of the allegedly infringing device. Johnson Worldwide, 175 F.3d at 988. We affirm a district court's grant of summary judgment of non-infringement only if, "after viewing the alleged facts in the light most favorable to the non-movant, there is no genuine issue whether the accused device is encompassed by the claims." Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1304 (Fed. Cir. 1999).

On appeal, Searfoss challenges both the claim construction ordered by the district court and the resultant grant of summary judgment of non-infringement. We address these challenges below.

### I.

The language of the claim defines the boundary of its scope. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed. Cir. 2002). Accordingly, "the claim construction inquiry . . . begins

and ends in all cases with the actual words of the claim.” *Id.* (quoting Renishaw plc v. Marposs Societa’ per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998)). Claim terms must be construed as they would be understood by a person of ordinary skill in the art to which the invention pertains. Specialty Composites v. Cabot Corp., 845 F.2d 981, 986 (Fed. Cir. 1988). What the claim terms would mean to laymen is irrelevant. “The words used in the claim[ ] are interpreted in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history, if in evidence.” Teleflex, 299 F.3d at 1324.

As a threshold matter, we agree with both parties that the “actuation means” limitation of claim 3 is not a means-plus-function limitation, as the district court found. The claim specifically recites the structure that performs the claimed function (“said actuation means including first and second pivot connections respectively between said first and second tension bail legs and a midpoint on said respective first and second extension bail legs”), thus overcoming the presumption resulting from use of the word “means.” Though we find that the district court erred in construing the “actuation means” limitation to be a means-plus-function limitation, the error was harmless. Indeed both parties agree that it was harmless because they agree the scope of the claim would be identical, whether under the doctrine of equivalents or under the literal scope of the means-plus-function claim.

With regard to the substance of the district court’s claim construction, Searfoss argues that the district court erred in not giving the term “connecting” its ordinary meaning, as shown in general usage dictionaries, which encompasses both direct and indirect connections, and instead improperly limited its construction to direct connections.[2] Searfoss cites to several general usage, non-technical dictionaries, which it argues support a definition of “connecting” to encompass both direct and indirect connections. See Webster’s Third New International Dictionary (1986) (defining “connect” as “to join, fasten or link together usually by means of something intervening”). Searfoss also points to the other dictionaries referenced by the trial court. See American Heritage Dictionary (4th ed. 2000) (defining connect as “(1) to join or fasten together; (2) to associate or consider as related . . . ; (3) to join to or by means of a communications circuit . . . ; (4) to plug in (an electrical cord or device) to an outlet.”); see also Oxford English Dictionary (2d ed. 1989). According to Searfoss, neither the district court nor Pioneer has

pointed to anything in the specification to overcome the “heavy presumption” of the “ordinary meaning” of “connect,” and the proper construction must encompass both direct and indirect connections.

We disagree. The district court clearly acknowledged the competing general dictionary definitions of “connect,” including direct and indirect connections. Markman Order at 7 (“Indeed, the court need not look to the dictionary at all, inasmuch as the court is familiar with the competing definitions advocated by the parties. The court need only decide which meaning, whether it be a direct connection or a tangential connection, is described in claim 3.”). In construing the claim, however, the district court did not, and indeed must not, stop with the dictionary definitions offered by Searfoss. Instead, the district court did as it must, and consulted the written description. Bell Communications Research, Inc. v. Vitalink Communications, Corp., 55 F.3d 615, 619 (Fed. Cir. 1995) (“[I]t is equally ‘fundamental that claims are to be construed in light of the specifications and both are to be read in view of ascertaining the invention.’”) (quoting United States v. Adams, 383 U.S. 39, 49 (1966)). The district court found that, as used in claim 3, the term “connecting” refers to a “direct pivotal connection between the tension bail and the extension assembly” because the patent referred to the term “connecting” as synonymous with “attaching.” We agree. Throughout the specification we find references to direct connections between the legs of the tension bail and the legs of the extension assembly; and indeed, every pertinent figure depicts a direct connection between the legs of the tension bail and those of the extension assembly. See ’955 patent, col. 3, ll. 39-44, col. 6, ll. 39-55, figs. 1, 5-8. Moreover, we agree with the district court that a construction of the word “connect” to include “indirect” and non-rigid connections (such that the canvas cover itself could be the connection between the tension bail and the extension leg assembly) is problematic because it would lead to a reading of the claim such that the cover (as the actuation means) is exerting a downward force upon itself. We hold that the district court was correct in interpreting “connecting” as used in this patent to include only direct, rigid, pivotal connections.

## II.

“An element in the accused product is equivalent to a claim limitation if the differences between

the two are ‘insubstantial’ to one of ordinary skill in the art.” Eagle Comtronics, Inc. v. Arrow Communication Labs., Inc., 305 F.3d 1303, 1315 (Fed. Cir. 2002). In determining whether the differences between the accused product and the claim limitation are “insubstantial,” it is axiomatic that we may determine whether the accused product performs the same function, in the same way with the same result.

In the present case, Searfoss argues that the only difference between the claimed system and the accused system is that the accused system relocated the pivot points for the tension assembly from a direct pivotal connection with the legs of the extension assembly to a pivotal connection with the load bed that indirectly connects to and pivots with respect to the extension assembly through the cover. Despite this difference, Searfoss argues that the accused device is equivalent to the patented invention because the two systems perform the same function in the same way to achieve the same result (the center member of the tension assembly applies a downward force on the cover when the cover is fully extended and the force is substantially reduced when the cover is being retracted).

There is no real dispute that the accused device performs the same function as the claimed invention with the same result -- in both the claimed invention and the accused device a center member of the tension assembly exerts a downward force on the cover, thus closing any gap between the cover and the sides of the load bed proximate to the front of the load bed. The only real issue is whether the accused device operates in the “same way” as the claimed invention. In support of its argument that the two operate in the same way, Searfoss asserts that the accused device’s combination of the pivot connection between the tension assembly and the load bed together with the cover operates in the same way as the direct pivotal connection in the claimed invention.

We agree with Searfoss that a combination of physical components may serve as an equivalent to a single limitation of the claimed invention. See Ethicon Endo-Surgery, 149 F.3d at 1320 (“[T]wo physical components of an accused device may be viewed in combination to serve as an equivalent of one element of a claimed invention.”). But “[i]t is important to ensure that the application of the doctrine [of equivalents], even as to an individual element, is not allowed such broad play as to

effectively eliminate that element in its entirety.” Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). And, as the district court noted, “in cases where the patentee’s theory of equivalents would ‘entirely vitiate a particular claim element, partial or complete summary judgment should be rendered by the court.’” Sage v. Devon Indus., Inc., 126 F.3d 1420, 1429 (Fed. Cir. 1997).

It is for this reason we must reject Searfoss’ argument and agree with the district court that, “[t]o find, as [Searfoss] argue[s], that the ‘indirect connection’ constitutes an equivalent of the direct connection function described in Claim 3 would, in effect, completely vitiate the connection function.” When the extension assembly operates to cover the load bed, the accused device requires the cover to move the tension bail into position such that it can exert a downward force on the cover; in the claimed invention, the direct connection automates the process of placing the tension bail in position to exert a downward force. As the district court found, the acceptance of Searfoss’ arguments would require this court to ignore the construction of “connecting” discussed in detail above, as the accused device indisputably lacks any direct, physical, rigid connection.

Because a finding of infringement under the doctrine of equivalents would vitiate the requirement of a direct connection through an actuation means, no reasonable jury could find that the accused device is insubstantially different than the claimed invention. Summary judgment of non-infringement is thus appropriate.

#### CONCLUSION

Because the district court correctly construed the disputed claim terms of the ’955 patent and thus Pioneer did not infringe claim 3 under the doctrine of equivalents, the district court’s entry of summary judgment on non-infringement is

AFFIRMED.

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[1] This diagram is from U.S. Patent No. 5,957,523, which the parties agree shows the structure of the accused product.

[2] Searfoss also challenges the district court's construction of what it calls the "whereby clause" of claim 3. Because, as discussed in section II below, we affirm the district court's grant of summary judgment on the basis of the "actuation means" limitation, we need not address the construction of the "whereby clause."