

United States Court of Appeals for the Federal Circuit

03-1519, -1563

FRANK'S CASING CREW & RENTAL TOOLS, INC.,

Plaintiff-Appellant,

v.

WEATHERFORD INTERNATIONAL, INC.,

Defendant-Cross Appellant.

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Appealed from United States District Court for the Western District of Oklahoma

Judge Stephen P. Friot

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DECIDED: November 30, 2004

Before RADER, Circuit Judge, FRIEDMAN, Senior Circuit Judge, and DYK, Circuit Judge.

RADER, Circuit Judge.

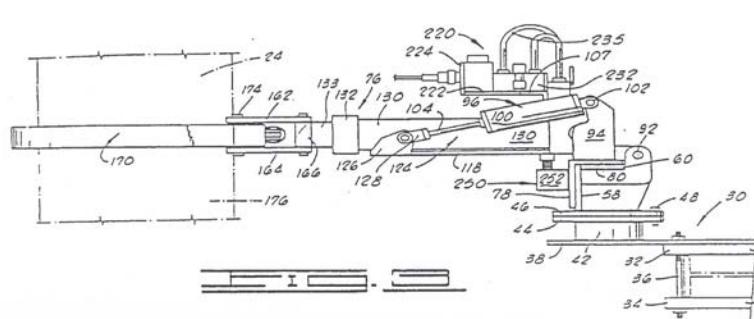
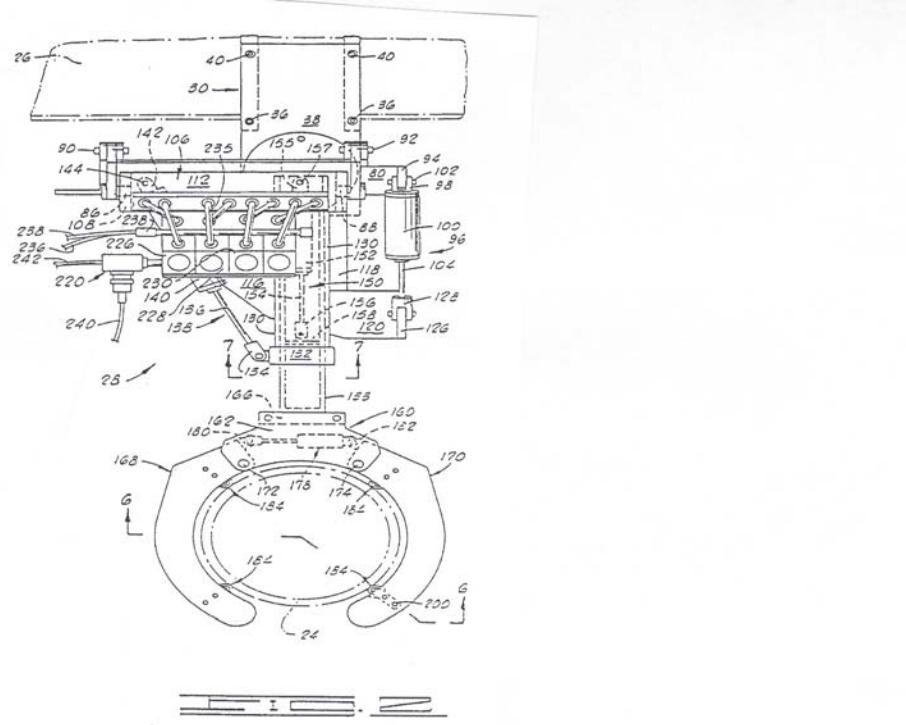
The United States District Court for the Western District of Oklahoma granted summary judgment of noninfringement to Weatherford International, Inc. (Weatherford). Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc., No. CIV-01-104-F (W.D. Okla. May 28, 2003). The district court determined that Weatherford's StabMaster, a remotely controlled casing stabbing device mounted in a derrick, does not infringe Frank's Casing Crew & Rental Tools, Inc.'s (Frank's) U.S. Patent No. 5,049,020 (the '020 patent). Because the district court correctly decided that the "means for selectively pivoting" clause must necessarily include a lift plate located under the boom (not present in the StabMaster), this court affirms.

I.

The '020 patent, entitled "Device for Positioning and Stabbing Casing from a Remote Selectively Variable Location," claims a system for handling (i.e., "positioning and stabbing") sections of well casing suspended within a derrick during oil field operations. '020 patent, col. 1, ll. 19-30. Well casing lines a well bore to facilitate removal of oil or gas. During completion of a well, the derrick suspends sections of casing from a pulley, known as a crown block, and then lowers the section for connection to another casing section already in the well bore. Id. at col. 8, ll. 38-44. The test of engineering skill is to align and connect the sections properly. Id. at col. 2, ll. 3-11. Because the sections of casing may be up to thirty-six inches in diameter and weigh 300 pounds per foot, manual alignment is difficult and poses a risk of injury. Id. at col. 6, ll. 8-9; col. 7, ll. 24-25; col. 18, ll. 29-34. The '020 patent addresses these problems with a remotely controlled device for aligning the casing sections.

The '020 patent's stabbing apparatus is less bulky than prior art devices. Thus, the '020 system mounts the apparatus on the derrick without interfering with other operations. Id. at col. 5, l. 62 - col. 6, l. 3. The '020 patent teaches that the invention has "at least three major interconnectable subassemblies which can be easily taken apart to facilitate transport, storage and operative mounting of the entire apparatus at a selected location in a drilling derrick and above the floor of the derrick." Id. at col. 7, ll. 1-5. Additionally, the invention has an "extendable boom which carries jaws at one end for engaging the casing, and which is hydraulically movable in an up-and-down pivoting motion or in a side-to-side motion, or both such motions simultaneously." Id. at col. 7, ll. 28-33.

The claimed stabbing apparatus thus raises and lowers the boom holding the casing section. The preferred embodiment for performing this function includes a hydraulic piston and cylinder subassembly 96, which is connected to the boom through a plate structure made up of a diagonal boom plate 116, a forwardly extending boom plate 118, and a lateral lift plate 120,¹ which are shown in Figures 2 and 3, reproduced below. Id. at col. 11, ll. 5-18.



¹ The district court and the parties referred to these plates collectively as a "lift plate."

When not in use, an operator may lift the stabbing apparatus up out of the way by activating the boom. Frank's asserted claims 6, 7, and 8 against Weatherford, each of which involves pivoting the boom up and down but does not require yawing (side-to-side movement).

Claim 6, for instance, states²:

6. A system for making up a vertically extending string of interconnected casing sections comprising:

....
a derrick . . .

....
a derrick bracket subassembly detachably connected to a side of said derrick;
a boom and jaw subassembly detachably connected to said derrick bracket
subassembly, and including:

....
**means for selectively pivoting said boom about said horizontal axis
to raise and lower the second end of said boom which carries
said jaws, and to elevate said boom to a location where it
extends in a generally vertical direction;**

....
a remote control assembly **detachably** connected to said boom and jaw
subassembly . . .

Id. at col. 22, l. 20 - col. 23, l. 39 (emphasis added). While none of the foregoing claims requires yawing, other claims of the '020 patent do include such a limitation. Id. at col. 18, ll. 60-64 (claim 1); col. 19, ll. 42-43 (claim 2); col. 20, ll. 45-51 (claim 3); col. 22, ll. 13-19 (claim 5).

The parties presented the trial court two limitations for claim construction: "means for selectively pivoting said boom about said horizontal axis to raise and lower the second end of said boom which carries said jaws, and to elevate said boom to a

² The "means for selectively pivoting" limitations in claims 6, 7, and 8 are identical with the exception that the location where the boom "extends in a vertical direction" is identified as a "parked" location in claim 8. Because the parties agree that the addition of "parked" does not affect the claim construction of the limitations in a way that is pertinent to this case, this court treats these limitations identically.

location where it extends in a generally vertical direction" and "detachably." Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc., No. CIV-01-104-F, slip. op. at 2-8 (W.D. Okla. July 22, 2002). The parties and the district court agreed that the "means for selectively pivoting" limitation is in means-plus-function format, governed by 35 U.S.C. § 112, ¶ 6. The parties also agreed on the function of the means-plus-function limitation, namely "selectively pivoting said boom about said horizontal axis to raise and lower the second end of said boom which carries said jaws, and to elevate said boom to a location where it extends in a generally vertical direction." '020 patent, col. 22, ll. 61-66. The parties disputed, however, the structure corresponding to the claimed function disclosed in the specification. For Frank's, the corresponding structure is the piston and cylinder subassembly; for Weatherford, the structure includes the lift and boom plates disclosed in the preferred embodiment of the invention. The district court agreed with Weatherford:

[The "means for selectively pivoting"] must necessarily include a lift plate located under the boom. The boom rests on the lift plate, and the boom is not connected to the lift plate. The boom moves back-and-forth across the lift plate. The boom is raised and lowered by a piston and cylinder that operate against the lift plate, and not directly against the boom.

Frank's Casing Crew, No. CIV-01-104-F, slip. op. at 14 (W.D. Okla. July 22, 2002). Frank's disagrees, arguing the district court improperly imported structure unnecessary to perform the recited function of pivoting the boom about the horizontal axis. Instead, as noted, Frank's asserts that the relevant corresponding structure is the piston and cylinder subassembly.

In reaching its interpretation, the district court also examined the prosecution history of the '020 patent. Id. The '020 patent is a continuation of Application Ser. No.

203,252, which issued as Patent No. 4,921,386 (the '386 patent). During prosecution of the '386 patent, the examiner required the applicant to distinguish the invention from the casing handling device described in U.S. Patent No. 3,840,128 issued to Swoboda, Jr. et al. (Swoboda). The Swoboda device used a cylinder attached and under the boom for the lifting function. To distinguish the Swoboda device, the applicant noted that its position compromises its use: “[a lifting cylinder,] located directly below the boom and directly connected thereto, [that includes] a yawing piston and cylinder subassembly which extends at an acute angle to the longitudinal axis of the boom, and is attached at one end to a different part of the boom and jaw subassembly, and can cause the boom to cant or swing from side-to-side, simply cannot be used.” May 19, 1989 Amendment in response to March 3, 1989 PTO action in Application No. 203,252, at 41 (emphasis in original) (Amendment). In other words, a lifting cylinder directly connected to and located below the boom cannot be used with the '020 patent. The applicant also argued that the “spatial and positioning limitation” in Swoboda “is overcome in the present invention by connecting the [cylinder which lifts the boom] not directly to the boom, but by connecting it indirectly to the boom through securement” to the lifting plate. Id. (emphasis in original).

With respect to the claim term “detachably,” Frank’s would give the word no special meaning, but read it to include no limitation involving the ease of detachability. Conversely, Weatherford argued “detachably” should be limited to parts that can be easily and quickly taken apart or disconnected. The district court ruled “detachably” “means that the component or subassembly in question may be readily disconnected.” Frank’s Casing Crew, No. CIV-01-104-F, slip. op. at 16 (W.D. Okla. July 22, 2002).

Following the district court's claim construction, Frank's filed a motion for summary judgment of infringement. Weatherford filed a cross motion for summary judgment of non-infringement. In granting summary judgment of no literal infringement, the district court found "that no reasonable jury could find an insubstantial difference between the two raising and lowering mechanisms" of claims 6, 7, and 8, and of Weatherford's StabMaster. Frank's Casing Crew, No. CIV-01-104-F, slip. op. at 26 (W.D. Okla. May 28, 2003). The court concluded: "The two mechanisms represent two distinct structural approaches to performing essentially the same function [and] [e]ach approach has its advantages and disadvantages." Id. The district court also found no infringement under the doctrine of equivalents for the same reasons and no literal infringement under § 112, ¶ 6. Finally, the district court expressly noted that the raising and lowering mechanism of the StabMaster was not based on "after-developed technology." Id. The district court also held that the prosecution history of the '386 patent "amounted to a disclaimer" of the "below-mounted and directly-attached lifting means." Id. On appeal, Frank's challenges the district court's interpretation of the claimed "means for selectively pivoting" clause and the term "detachably" as well as the summary judgment of non-infringement.

In a separate ruling, the district court denied Weatherford's request for attorney fees and costs, declining to find the case "exceptional" under 35 U.S.C. § 285. Frank's Casing Crew, No. CIV-01-104-F (W.D. Okla. July 18, 2003). Weatherford cross appeals the district court's finding that this case was not exceptional.

II.

This court reviews a district court's grant of a motion for summary judgment without deference. Kemco Sales Inc. v. Control Papers Co., 208 F.3d 1352, 1359 (Fed. Cir. 2000). This court also reviews claim construction without deference. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc); Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). Infringement, on the other hand, either literal or by equivalents, is a question of fact. RF Del., Inc. v. Pac. Keystone Techs., Inc., 326 F.3d 1255, 1266 (Fed. Cir. 2003). Thus, a trial court may determine infringement on summary judgment only "when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001). A patent applicant may limit the scope of any equivalents of the invention by statements in the specification that disclaim coverage of subject matter. J & M Corp. v. Harley-Davidson, Inc., 269 F.3d 1360, 1366 (Fed. Cir. 2001). Such limitations on the scope of equivalents are legal determinations, which this court reviews without deference. Id. Although the determination of whether a case is exceptional is a question of fact reviewed for clear error, this court reviews a district court's decision to award attorney fees in an exceptional case only for abuses of discretion. Cybor Corp., 138 F.3d at 1460.

III.

As noted, the claim element "means for selectively pivoting" is in means-plus-function format and governed by § 112, ¶ 6. A means-plus-function limitation requires a court first to identify the claimed function and then to determine the structure in the

specification that corresponds to that function. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1322 (Fed. Cir. 2003). The function of the limitation in claims 6 through 8 “selectively pivot[s] said boom about said horizontal axis to raise and lower the second end of said boom which carries said jaws, and [. . .] elevate[s] said boom to a location where it extends in a generally vertical direction.” ’020 patent, col. 22, l. 20 - col. 23, l. 39.

The district court determined that the structure for this function necessarily includes a lift plate under the boom. The specification amply supports the trial court’s identification of corresponding structure. The only structure identified in the ’020 patent for performing the pivoting function is the lift plate under the boom. *Id.* at Figures 3-5, col. 11, ll. 5-18. The ’020 patent discloses a piston and cylinder subassembly, but any mention of that subassembly in connection with the lifting function includes a connection to the lift plate. *Id.* at Figures 3-5, col. 11, ll. 5-18. In other words, the specification on occasion refers to the piston and cylinder subassembly without mentioning the lift plate, *id.* at Abstract; col. 10, ll. 44-50; col. 11, ll. 21-23; col. 17, ll. 15-22, but the only embodiment showing use of the piston and cylinder subassembly discloses a direct connection to the lift plate. The district court correctly identified the lift plate as necessary structure for the lifting function.

The prosecution history supports the district court’s reading of the claims. In distinguishing the Swoboda device, the applicant stated that the lifting cylinder “simply cannot be used” when directly connected to the boom. Amendment at 41 (emphasis in original). This statement underscores the essentiality of the lift plate to the claimed function.

A consistent reading of the claims also supports the trial court's claim construction. In other words, "the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims." Fin Control Sys. Pty, Ltd. v. OAM, Inc., 265 F.3d 1311, 1318 (Fed. Cir. 2001). If possible, this court construes claim terms "in a manner that renders the patent internally consistent." Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1379-80 (Fed. Cir. 2001).

In this case, this court observes that the patent includes claims with a yawing function. The term "means for selectively pivoting" should have the same meaning in these claims as in claims 6 through 8, unless the specification gives some reason to expect otherwise. Because the specification does not suggest any reason to depart from a consistent meaning, the pivoting limitation includes a lift plate located under the boom. Otherwise the device could not perform a yawing function.

This court recognizes that the principle of consistency within claims operates within the framework of related claims. Epcon Gas Sys. Inc. v. Bauer Compressors, Inc., 279 F.3d 1022, 1031 (Fed. Cir. 2002) ("The same term or phrase should be interpreted consistently where it appears in claims of common ancestry."); Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1310 (Fed. Cir. 1999) ("A patent's written description can set forth more than one definition of a claim term."). In this case, however, this court discerns a sufficient relationship between the claims with and without a yawing function. In making this determination, this court has read column 17, lines 19-29, of the '020 patent. This passage states that the "piston and cylinder

subassembly 96 is retracted so that the boom is pulled upwardly" and that the "[r]aising of the . . . boom . . . is effected by the upward lifting of the . . . plate." This passage teaches the role of the piston and cylinder subassembly in the lifting of the boom. This passage, however, does not expressly disclose use of the piston and cylinder subassembly to lift the boom without the lift plate. Instead the specification tells one of skill in this art that the subassembly effects the "upward lifting" by means of the plate. The lift plate is not superfluous structure between the piston and cylinder subassembly and the boom, but an essential feature that is necessary to enable the embodiment to yaw and lift at the same time. See Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed. Cir. 2003) (The corresponding structure to a function set forth in a means-plus-function limitation "must be necessary to perform the claimed function."). Thus, the means-plus-function limitation must have the same structure in claims with and without the yawing function. The specification gives no reason to read the same limitation differently in claims with or without yawing. Because the '020 patent neither clearly indicates that the pivoting limitation should have different meanings in claims that do not have a yawing function, nor discloses an alternative embodiment, the trial court correctly read "means for selectively pivoting" to include a lift plate under the boom. To conclude otherwise would render the patent internally inconsistent and the invention inoperable. Because these reasons sufficiently support the district court's claim construction, this court need not reach the district court's disclaimer finding.

Turning now to the infringement inquiry, literal infringement requires that each and every limitation set forth in a claim appear in an accused product. Becton Dickinson & Co. v. C.R. Bard, Inc., 922 F.2d 792, 796 (Fed. Cir. 1990). "Literal

infringement of a § 112, ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.” Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). Although the issue of whether an accused device includes a structural equivalent under § 112, ¶ 6 claim is a question of fact, id. at 1268, the district court may find the absence of an equivalent where “no reasonable jury could have found that the accused device has an equivalent to the disclosed structure.” Chiuminatta Concrete Concepts Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309 (Fed. Cir. 1998).

Because structural equivalents under § 112, ¶ 6 are included within literal infringement of means-plus-function claims, “the court must compare the accused structure *with the disclosed structure*, and must find equivalent *structure* as well as *identity* of claimed *function* for the structure.” Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987) (emphasis in original). This inquiry for equivalent structure under § 112, ¶ 6 examines whether “the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.” Odetics, 185 F.3d at 1267. This case satisfies the requirement of an identity of function between the under-mounted hydraulic cylinder on Weatherford’s device and the hydraulic cylinder attached to the lift plate in the ‘020 patent disclosure. Nonetheless, as the district court correctly discerned, no reasonable jury could fail to find a substantial difference between the two raising and lowering mechanisms in the accused device and the ‘020 patent. As the trial court observed, the two mechanisms “represent two distinct

structural approaches to performing essentially the same function.” Frank’s Casing Crew, No. CIV-01-104-F, slip. op. at 24-25 (W.D. Okla. May 28, 2003). The “indisputable mechanical incompatibility between the two devices” underscores this finding. Id. at 26. Thus, this court agrees with the district court that summary judgment of non-infringement under § 112, ¶ 6 is appropriate.

There is also no possible equivalent under the doctrine of equivalents. The primary difference between structural equivalents under § 112, ¶ 6 and the doctrine of equivalents is a question of timing. Al-Site Corp. v. VSI Int’l, Inc., 174 F.3d 1308, 1321 n.2 (Fed. Cir. 1999). As this court has explained, “[a] proposed equivalent must have arisen at a definite period in time, i.e., either before or after [patent filing]. If before, a § 112, ¶ 6 structural equivalents analysis applies and any analysis for equivalent structure under the doctrine of equivalents collapses into the § 112, ¶ 6 analysis. If after, a non-textual infringement analysis proceeds under the doctrine of equivalents.” Id. In this case the proposed equivalent – a lifting mechanism without a lift plate – was in use before filing of the patent, therefore this court need not conduct a separate analysis under the doctrine of equivalents. See, e.g., Kemco Sales, 208 F.3d at 1364 (“Because the ‘way’ and ‘result’ prongs are the same under both the 35 U.S.C. section 112, paragraph 6 and the doctrine of equivalents tests, a structure failing the 35 U.S.C. section 112, paragraph 6 test under either or both prongs must fail the doctrine of equivalents test for the same reason(s.”).

Because affirming the district court’s claim construction of “means for selectively pivoting” and its finding of no infringement based on that construction, this court need not address the district court’s claim construction of “detachably.”

IV.

Weatherford's cross-appeal challenges the district court's denial of attorney fees. This court reviews the district court's denial of attorney fees under 35 U.S.C. § 285 for an abuse of discretion. Va. Panel Corp. v. MAC Panel Co., 133 F.3d 860, 867 (Fed. Cir. 1997). This court affords trial judges discretion to award attorney fees for good reasons. King Instrument Corp. v. Otari Corp., 767 F.2d 853, 866-67 (Fed. Cir. 1985). After presiding over the preparation and trial of the case, the trial judge can best weigh the relevant considerations, such as the closeness of the case, the tactics of counsel, the flagrant or good faith character of the parties' conduct, and any other factors contributing to imposition of punitive sanctions or to fair allocation of the burdens of litigation. Modine Mfg. Co. v. Allen Group, Inc., 917 F.2d 538, 543 (Fed. Cir. 1990); S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc., 781 F.2d 198, 201 (Fed. Cir. 1986).

This court detects no abuse of discretion in the district court's ruling on attorney fees. In denying Weatherford's motion for attorney fees and costs, the district court weighed a variety of factors, including the adequacy of Frank's investigation before it sued Weatherford and the allegations of litigation misconduct based on its decision to persist in offering arguments dismissed by the district court's July 22, 2002 Markman Order. Frank's Casing Crew, No. CIV-01-104-F, slip. op. at 1-6 (W.D. Okla. July 18, 2003). On review of the record, this court agrees with the trial court that "[t]his is simply not a case in which the conduct of the plaintiff, in filing and prosecuting the action, was offensive to the court (even mildly so)." Id. at 5.

V.

In sum, this court affirms the district court's conclusion that the "means for selectively pivoting" must include a lift plate located under the boom and also affirms the district court's summary judgment of non-infringement. In addition, this court affirms the district court's denial of Weatherford's request for attorney fees.

COSTS

Each party shall bear its own costs.

AFFIRMED