

United States Court of Appeals for the Federal Circuit

03-1364

NOMOS CORPORATION,

Plaintiff-Appellant,

v.

BRAINLAB USA, INC. and BRAINLAB, INC.,

Defendants-Appellees.

Jerry R. Selinger, Jenkins & Gilchrist, of Dallas, Texas, argued for plaintiff-appellant. With him on the brief were Timothy G. Ackermann; and Sharon A. Israel, Jenkins & Gilchrist, of Houston, Texas.

Jay Reed Campbell, Renner, Otto, Boisselle & Sklar, LLP, of Cleveland, Ohio, argued for defendants-appellees. With him on the brief was John J. Del Col.

Appealed from: United States District Court for the District of Delaware

Judge Joseph J. Farnan, Jr.

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DECIDED: February 4, 2004

Before MAYER, Chief Judge, GAJARSA and DYK, Circuit Judges.

MAYER, Chief Judge.

NOMOS Corp. (“NOMOS”) appeals the judgment of the district court granting BrainLAB USA, Inc. and BrainLAB, Inc. (collectively “BrainLAB”) summary judgment of noninfringement of U.S. Patent No. 5,411,026 (“’026 patent”). NOMOS Corp. v. BrainLAB, Inc., 239 F. Supp. 2d 430 (D. Del. 2003). Because we agree with the district court’s construction of limitation (a) of claim 1, we affirm.

Background

In the context of radiation therapy, a cancerous lesion often shifts position between the time a treatment plan is designed and the administration of treatment. As a result, higher than necessary doses of radiation were historically required to ensure that the entire lesion was exposed. Unfortunately, the excess radiation also caused damage to healthy tissue. The ’026 patent, which is owned by NOMOS, claims a

method of fine-tuning the positioning of a patient during radiation treatment so as to maximize the dose to the lesion while minimizing the exposure of surrounding tissue.

The invention operates as follows: First, the position of the lesion is identified in a computerized tomographic (“CT”) scan, from which a physician designs a radiation therapy plan. The patient is then placed on the treatment table of a radiation therapy device, such as a linear accelerator. Because the position of the lesion or the patient may have shifted, an ultrasound probe, which is disposed on the treatment table, is used to generate an ultrasound image of the lesion’s new position. The ultrasound image is then compared with the CT scan. If the lesion has in fact shifted, the physician may adjust the treatment plan accordingly.

NOMOS brought suit against BrainLAB claiming that BrainLAB’s ExacTrac device, which is also a patient positioning system used in the administration of radiation therapy, infringes the ’026 patent. BrainLAB moved for summary judgment asserting, *inter alia*, that the ExacTrac did not meet limitation (a) of claim 1, a means-plus-function claim, which reads:

1. A lesion position verification system for use in a radiation therapy plan, for use with a radiation therapy device, for treating a lesion within a body of a patient, comprising

(a) a means for generating at least one ultrasound image of the lesion in the patient’s body; and

(b) a means for indicating the position, with respect to the radiation therapy device, of the means for generating the at least one ultrasound image when the ultrasound image is generated, whereby the position of the lesion in the ultrasound image can be compared with a position of the lesion in the radiation therapy plan.

’026 patent, col. 12, ll. 7-19 (emphasis added). Specifically, BrainLAB alleged that the ExacTrac device utilizes a handheld ultrasound probe, while the means for generating the ultrasound image in the ’026 patent must be affixed to the treatment table so that its orientation is maintained with respect to the axis of the treatment table.

After a Markman hearing, the district court construed the corresponding structure of limitation (a) of claim 1 as a “fixed ultrasound probe and a bracket or fixation device that maintains the ultrasound probe perpendicular to the treatment table and constrains it to rotate or move along the axis of the table in order to generate an ultrasonic image, and equivalent structures.” NOMOS Corp. v. BrainLAB, Inc., 195 F. Supp. 2d 606, 611 (D. Del. 2002). The district court then granted BrainLAB’s motion for summary judgment, holding, inter alia, that no reasonable juror could conclude that the ExacTrac device was an equivalent of the structure corresponding with the “means for generating at least one ultrasound image of the lesion in the patient’s body.”¹ NOMOS, 239 F. Supp. 2d at 436. The district court elaborated that while the ExacTrac and the “means for generating” limitation have identical function, each performs that function in a substantially different manner. Id. The district court also held that the doctrine of equivalents was inapplicable because there was no literal infringement of the “means for generating” limitation and the relevant technology was not after-developed. Id. at 437.

Discussion

“We review a district court’s grant of summary judgment de novo.” Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1379 (Fed. Cir. 2000). “Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law.” Id. “When ruling on a motion for summary

¹ The district court construed several other portions of the patent. Because our determination with respect to limitation (a) of claim 1 is dispositive, the additional grounds for decision provided below are not addressed. See Laitram Corp. v. Rexnord,

judgment, all of the nonmovant's evidence is to be credited, and all justifiable inferences are to be drawn in the nonmovant's favor." Id.; see also Stryker Corp. v. Davol Inc., 234 F.3d 1252, 1257 (Fed. Cir. 2001).

We review the district court's construction of the "means for generating" limitation de novo. See Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed. Cir. 2002). Likewise, determination of the function and corresponding structure of a means-plus-function claim is reviewed de novo. Clearstream Wastewater Sys., Inc. v. Hydro-Action, Inc., 206 F.3d 1440, 1445 (Fed. Cir. 2000); Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1358 (Fed. Cir. 1999).

The parties agree that claim 1 is a means-plus-function claim and is, therefore, governed by 35 U.S.C. § 112, ¶ 6. Thus, we must identify both the claimed function and the corresponding structure. See Micro Chem., Inc. v. Great Plains Chem. Co., Inc., 194 F.3d 1250, 1258 (Fed. Cir. 1999).

The parties also agree that the claimed function of limitation (a) of claim 1 is "generating at least one ultrasound image of the lesion in the patient's body." They disagree, however, with respect to the determination of corresponding structure. NOMOS contends that the corresponding structure is an ultrasound probe and nothing more. To support this contention, NOMOS refers to the specification, which states, "Preferably the means for generating 420 an ultrasound image 421 is a conventional, commercially available ultrasound probe 422." '026 patent, col. 7, ll. 8-10. NOMOS further argues that the principle of claim differentiation prohibits including a fixation device in the corresponding structure of limitation (a) of claim 1 because dependent claim 3, which claims a "means for mounting the ultrasound probe to the radiation therapy device," would otherwise be rendered superfluous.

Inc., 939 F.2d 1533, 1535 ("Since the failure to meet a single limitation is sufficient to

BrainLAB, agreeing with the district court's construction, asserts that the corresponding structure should include both an ultrasound probe and a fixation device that secures the probe to the treatment table. To support its argument, BrainLAB notes that throughout the patent the ultrasound probe is described as including a fixation device and that an ultrasound probe alone would be incapable of performing the agreed upon function.

We look to the specification of the '026 patent to determine the corresponding structure. See Smiths Indus., 183 F.3d at 1357. While we are careful to limit the corresponding structure to only that which is necessary to perform the recited function, Asyst Tech., Inc. v. Empak, Inc., 268 F.3d 1364, 1371 (Fed. Cir. 2001), we keep in mind that "a means clause does not cover every means for performing the specified function." Laitram, 939 F.2d at 1536.

There are several sections of the patent that convince us that the corresponding structure should include a fixation device as held by the district court. The patent states "that the means for generating the ultrasound image may be an ultrasound probe, including a means for mounting the ultrasound probe to a radiation therapy device." '026 patent, col. 3, ll. 39-42 (emphasis added). This language indicates that the invention envisioned and claimed by the applicant included a fixation device that secures the probe to the treatment table. This is the only embodiment of the invention described in the '026 patent. As a result, the corresponding structure is limited to that embodiment, which includes a fixation device, and its equivalents. See Intellectual Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc., 336 F.3d 1308, 1319 (Fed. Cir. 2003). Further, the patent consistently states that the ultrasound probe is to be "disposed on" or "secured to" the treatment table. '026 patent, col. 7, ll. 6-10, 14-22; negate infringement of the claim, we will limit our analysis accordingly.").

col. 10, ll. 48-52. This is true even with respect to the language relied on by NOMOS, which is preceded by the following: “A means for generating 420 an ultrasound image 421 (FIG. 7) is disposed on treatment table 404.” Id. col. 7, ll. 6-10 (emphasis added). The patent further states that “Ultrasound probe 422, by means of any suitable conventional connection 423 is mounted so that it can be moved upwardly and downwardly with respect to bracket 423, so that ultrasound probe 422 may be brought into contact with the patient’s body 302, in order to generate ultrasound image 421.” Id. col. 7, ll. 16-22 (emphases added). Thus, it is clear from the written description that “in order to generate ultrasound image” the ultrasound probe must be mounted to the treatment table by a fixation device.

NOMOS counters that limitation (a) of claim 1 should not be interpreted so as to include a fixation device because dependent claim 3 claims a “means for mounting.” This argument, which relies on the concept of claim differentiation, is unavailing. First, as in Laitram, our interpretation of the corresponding structure comes from the written description, not from dependent claim 3 and, therefore, the “prohibition against reading limitations from a dependent claim into the independent claim is not violated.” 939 F.2d at 1538. Second, claim differentiation, which is a “guide, not a rigid rule,” does not override the requirements of § 112, ¶ 6 when the “claim will bear only one interpretation.” Id. (quoting Autogiro Co. of Am. v. United States, 384 F.2d 391, 404 (Ct. Cl. 1967)). In this case, only one embodiment is described in the ’026 patent, therefore, the corresponding structure is limited to this embodiment and its equivalents. See Intellectual Prop., 336 F.3d at 1319. NOMOS cannot evade the limitations of the statute by claiming a “means for mounting” in dependent 3. See Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1234 (Fed. Cir. 2001). A fixation device is correctly understood as part of the corresponding structure of limitation (a) of claim 1.

Having determined the function and corresponding structure of limitation (a) of claim 1, we turn next to the issue of infringement, which is a question of fact. Caterpillar, 224 F.3d at 1379. “To determine whether a claim limitation is met literally, where expressed as a means for performing a stated function, the court must compare the accused structure with the disclosed structure, and must find equivalent structure as well as identity of claimed function for that structure.” Laitram, 939 F.2d at 1536 (quoting Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987)); see also Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999).

With respect to function, there is no dispute that the ExacTrac device “generat[es] at least one ultrasound image of the lesion in the patient’s body.” See Ishida Co., Ltd. v. Taylor, 221 F.3d 1310, 1316 (Fed. Cir. 2000) (“Literal infringement of a claim with a means-plus-function clause requires that the accused device perform a function identical to that identified in the means clause.”). On the other hand, the structure of the ExacTrac device is neither the same nor an equivalent of the corresponding structure of limitation (a) of claim 1. See Caterpillar, 224 F.3d at 1379. This is so because the ExacTrac does not generate the ultrasound image in substantially the same way as the ’026 invention. See id.; Ishida, 221 F.3d at 1317; Chimuniatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309 (Fed. Cir. 1998). The ultrasound probe described in the ’026 patent must be fixed perpendicularly to the treatment table such that it may be moved only along the axis of the table. This allows for the probe to be lowered into contact with the patient’s body and for the orientation of the ultrasound probe, and thus the resulting image, to be constantly known. In contrast, the ExacTrac device is handheld. The physician may move the probe freely over the patient’s body in order to generate the ultrasound image.

The probe need not remain in any particular orientation with respect to the treatment table or any other point of reference. Thus, there is no literal infringement.

We also determine that there is no infringement under the doctrine of equivalents. When there is no literal infringement of a means-plus-function claim because the accused device does not use identical or equivalent structure, as in this case, the doctrine of equivalents might come into play when after-developed technology is involved. See Ishida, 221 F.3d at 1317; Chimuniatta, 145 F.3d at 1310. The technology allowing the ExacTrac device to function while handheld predates the '026 patent and, therefore, does not qualify as after-developed. Consequently, the finding of no literal infringement in this case is dispositive as to infringement under the doctrine of equivalents as well.

Conclusion

Accordingly, the judgment of the district court is affirmed.

AFFIRMED