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United States Court of Appeals for the Federal Circuit

03-1428

ZIMMER, INC.,

Plaintiff-Appellant,

v.

HOWMEDICA OSTEONICS CORPORATION,

Defendant-Appellee.

DECIDED: May 26, 2004

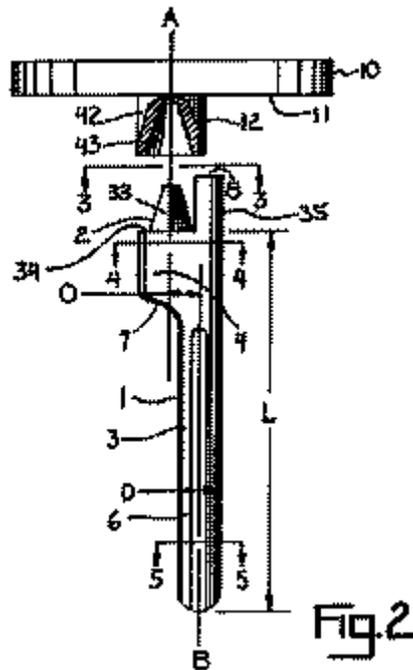
Before NEWMAN, GAJARSA, and DYK, Circuit Judges.

DYK, Circuit Judge.

Zimmer, Inc. (“Zimmer”) appeals the decision of the United States District Court for the Northern District of Indiana denying Zimmer’s motion for summary judgment of infringement of U.S. Patent No. 5,290,313 (the “’313 patent”), entitled “Offset Prosthetic Stem Extension,” and granting summary judgment of noninfringement in favor of Howmedica Osteonics Corporation (“Howmedica”). Zimmer, Inc. v. Howmedica Osteonics Corp., 258 F. Supp. 2d 874 (N.D. Ind. 2003). We reverse and remand.

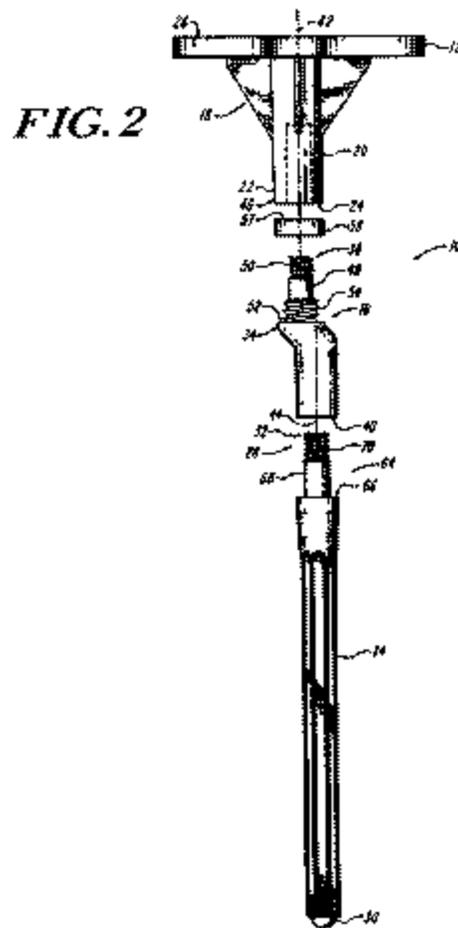
BACKGROUND

Appellant Zimmer is the assignee of the ’313 patent, which is directed to a modular system for prosthetic joints that are surgically implanted. The system is particularly suitable for use with prosthetic knee joints. Figure 2 of the patent is reproduced below:



The system includes a base portion 10 and a stem extension 1 that is inserted into a bone (in the case of a prosthetic knee, the tibia). The base portion includes a base mounting portion 12, and the stem extension includes a stem mounting portion 2 and an elongated stem portion 3, which are joined by a connection portion 4. The base portion is attached to the stem extension by mounting the base mounting portion on the stem mounting portion. In the embodiment shown in Figure 2, an extending pin 33 of the stem mounting portion mates with a corresponding recess 43 of the base mounting portion in a structure known as a “Morse taper.” The axis of the Morse taper A is offset from the axis of the elongated stem portion B by offset O. This permits the elongated stem portion to be inserted into the intermedullary canal (the portion of the bone containing marrow) of the tibia, while the base portion remains centered relative to the resected bone surface (the surface of the bone after a portion of the bone is removed during surgery).

Appellee Howmedica manufactures a modular prosthesis system similar to that disclosed in U.S. Patent No. 5,782,920 (“the ’920 patent”), for which Howmedica is a licensee. Figure 2 of the ’920 patent is reproduced below:



Howmedica's system also includes a base portion 12 that is joined to an elongated stem portion 14. However, the adapter element 16 before assembly is separate from the elongated stem portion, unlike the connection portion in the '313 patent, and it is attached to the elongated stem portion by a threaded connection. In addition, the base portion is attached to the connection portion by a second threaded connection, rather than the Morse taper disclosed in the '313 patent.

On June 17, 2002, Zimmer sued Howmedica, alleging that Howmedica's products infringed claim 1 of the '313 patent along with claims 2-4, 6, 8, 13, 14, and 17, all of which are dependent upon claim 1. Claim 1 claims:

A modular prosthesis system comprising a prosthetic base portion having a surface for positioning adjacent to a corresponding bone, the base portion having a base mounting means thereon, and a stem extension for insertion into a cavity in a bone, the stem extension having a stem mounting means for mounting the stem extension to the base mounting means, and the stem extension further having an elongated stem portion connected to the stem mounting means by a connection portion, and wherein the stem mounting means has a first central longitudinal axis and the elongated stem portion has a second central longitudinal axis substantially parallel to the first axis, but which is spaced apart therefrom to

provide an offset therebetween.

'313 patent, col. 5, ll.17-30. The dependent claims add further limitations. For example, claim 2 requires a “radially adjustable” stem mounting means, *id.*, col. 5, l.32,[\[1\]](#) and claim 3 requires the stem extension to be “releasably fixed to the base portion,” *id.*, col. 5, l.37.[\[2\]](#)

In a decision dated April 3, 2003, the district court construed all of the asserted claims simultaneously. First, the court held that “[t]he '313 patent requires that the stem extension be comprised of a single part.” *Zimmer*, 258 F. Supp. 2d at 878. In addition, the district court construed the claims as follows:

The Court interprets these claims as follows: The '313 patent describe[s] a prosthetic system with two primary components: a base and a stem extension. The base and stem each have mounting means that are designed to fit together in a variety of positions and orientations. This is important because the system can be adjusted radially, mid-surgery, to achieve the proper fit for each individual patient. The desired fit is achieved through the use of two longitudinal axes on the elongated stem portion of the stem extension. The axes are parallel but spaced apart to provide an offset for stability inside the bone. The base and stem are connected by a pin and recess. Moreover, the stem extension is “releaseably fixed” to the base, which permits the system to be further adjusted during surgery to achieve a proper fit for each patient.

Zimmer, 258 F. Supp. 2d at 881 (citation omitted).

The court further held that the accused products did not literally infringe any of the '313 patent claims (1) because they “lack an identical elongated stem extension” with an elongated stem and a connection portion on a single piece and (2) because they “utilize a permanent, threaded screw connection and interference fit to attach the base and stem extension that does not allow for radial adjustment,” unlike the adjustable Morse taper disclosed in the '313 patent. *Id.* at 882 (emphasis in original). The district court also held that the accused products did not infringe under the doctrine of equivalents. First, the court held that the accused products’ “stem extension is not modular” because it, unlike the one-piece stem extension disclosed in the '313 patent, “require[s] the assembly of three separate pieces . . . for the stem extension portion to be operable.” *Id.* at 883. Thus, according to the district court, “while the '313 patent and the HOWMEDICA products provide the same outcome (stabilizing joints in the human body), there is a substantial difference between the products in the way this end is accomplished.” *Id.* at 884. In addition, the district court held that Zimmer’s argument that

the Morse taper and threaded connections are equivalent “is discounted because the []’313 patent does not disclose the use of an interference fit.” Id.

Zimmer timely appealed, and we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

“We review the district court’s claim construction and the grant of summary judgment based thereon without deference.” Novartis Pharms. Corp. v. Eon Labs Mfg., Inc., 363 F.3d 1306, 1308 (Fed. Cir. 2004).

I

Judging from the confusing briefs filed by both parties in this court, the district court in this case confronted a difficult task in making sense out of the parties’ arguments. Apparently as a result of this party-generated confusion, the district court misunderstood the appropriate claim construction methodology in several respects. First, the district court erroneously construed all of the asserted claims simultaneously. See Zimmer, 258 F. Supp. 2d at 881. Although “[a] claim term used in multiple claims should be construed consistently,” Inverness Med. Switz. GmbH v. Princeton Biomeditech Corp., 309 F.3d 1365, 1371 (Fed. Cir. 2002), each claim must be considered individually.

Second, the district court improperly imported limitations from the written description into the claims. See, e.g., SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d 870, 875 (Fed. Cir. 2004); Teleflex, Inc. v. Ficos N. Am. Corp., 299 F.3d 1313, 1326 (Fed. Cir. 2002). For example, the district court required that “the stem extension [be] ‘releaseably fixed’ to the base” for all of the asserted claims, Zimmer, 258 F. Supp. 2d at 881, although the “releasably fixed” limitation appears only in claim 3, see ’313 patent, col. 5, l.37.

Third, the district court did not consider whether any of the claim limitations at issue are means plus function limitations that are interpreted pursuant to 35 U.S.C. § 112, ¶ 6. Rather, it only cited section 112, paragraph 6 in its infringement analysis under the doctrine of equivalents. See Zimmer, 258 F. Supp. 2d at 882. If a claim limitation is “expressed as a means or step for performing a specified

function without the recital of structure, material, or acts in support thereof, . . . such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6 (2000). Thus, a means plus function claim under section 112, paragraph 6 must be construed by reference to the specification, but it is not limited to the embodiment or embodiments disclosed in the specification. It also encompasses all equivalents to the disclosed structure. *Id.*; *Utah Med. Prods., Inc. v. Graphic Controls Corp.*, 350 F.3d 1376, 1381 (Fed. Cir. 2003).

II

A

Applying the correct methodology, the district court’s grant of summary judgment must be reversed because it was based on an incorrect construction of the claims.

First, the district court held that the accused infringing devices did not infringe claim 1 because they have separate connection portions, rather than the one-piece stem extension claimed in the ’313 patent. *See Zimmer*, 258 F. Supp. 2d at 878 (“The ’313 patent requires that the stem extension be comprised of a single part”); *see also id.* (stating that the ’313 patent requires “a one-part stem extension component”). The district court appeared to rest this one-piece requirement on its interpretation of the term “modular” in claim 1: “[T]he ’313 patent calls for a modular stem extension. HOWMEDICA’s stem extension is not modular. Instead, HOWMEDICA’s products require the assembly of three separate pieces (offset adaptor, locking ring, and stem extension) for the stem extension portion to be operable.” *Id.* at 883.

The appellee seeks to support this holding, arguing that the term “modular” in claim 1 means “one piece,” thus requiring that the stem extension be a single piece and excluding the accused devices because their stem extensions consist of two pieces. There is no basis for this construction in the claim language, specification or prosecution history. The parties agree that the term “modular prosthesis system” in the preamble to claim 1 is a claim limitation. The parties agree, and the district court correctly found, *id.* at 877 n.2, that the term “modular” means “standardized.” (Opening Br. of Pl.-Appellant at 52; Opening Br. for Def.-Appellee at 19; *see also Webster’s Third New International*

Dictionary 1452 (2002) (“planned or constructed on the basis of a standard pattern or standard dimensions : capable of being easily joined to or arranged with other parts or units”).) The term “modular” is not limited to one-piece units, and, in any event, it only modifies the term “prosthesis system” in the claims. Thus, if “modular” meant “one piece,” claim 1 would exclude the prosthesis system of the preferred embodiments disclosed in the specification because the prosthesis systems shown in the figures include two pieces – the stem extension and the base portion. Such a construction “is rarely, if ever, correct.” Vitronics Corp. v. Conceptoronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996). Nor is there any indication from the prosecution history that the term “modular” means “one piece.” Thus, we hold that the term “modular prosthesis system” in the preamble to claim 1 does not require a one-piece stem extension.

B

Alternatively, the appellee seeks to support the district court’s one-piece limitation by arguing that the term “stem extension” in claim 1 should be construed as limited to one-piece extensions. Although claim 1 refers to a single “stem extension” having both “a stem mounting means” and “an elongated stem portion,” ’313 patent, col. 5, ll.21-26 (claim 1), the claim does not require that the stem extension be a single piece. The mere fact that the stem mounting means and the elongated stem portion may have been two separate pieces before they were attached to form the stem extension does not take the stem extension outside of the scope of claim 1.

C

The appellee argues that, even if the terms “modular” and “stem extension” do not limit the stem extension to a single piece, the prosecution history evidences a disclaimer of a one-piece stem extension, relying particularly on an amendment in the course of prosecution. The examiner rejected claim 1 (among other claims) as being anticipated by U.S. Patent No. 4,963,155 to Lazzeri, et al. (“Lazzeri”). The applicant amended claim 1 by adding the phrase “central longitudinal” before the word “axis” both times it appeared in the claim. The applicant noted that “[t]he first and second longitudinal axes of applicant’s Claim 1 are both in the stem extension component” but also stated that the claim was

patentable over Lazzeri because “the first and second axes are offset from each other, . . . not coincident with each other.” (J.A. at 187, 189.) Thus, the distinction between the ’313 patent and Lazzeri is the offset between the axes, not whether the stem extension includes one or more pieces. The applicant’s statements therefore do not rise to the level of a clear and unambiguous disclaimer of a stem extension containing more than one piece. See, e.g., Omega Eng’g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“We have . . . declined to apply the doctrine of prosecution disclaimer where the alleged disavowal of claim scope is ambiguous.”); Inverness, 309 F.3d at 1372-73; (holding that ambiguous statements made during prosecution did not constitute a disclaimer).

We hold that the term “stem extension” in claim 1 encompasses both one-piece and multiple-piece stem extensions. We thus conclude that the district court erred in reading a one-piece limitation into claim 1.

D

The district court held that “a key feature of the ’313 patent is the movable base that is radially adjustable even after it is attached to the stem extension.” Zimmer, 258 F. Supp. 2d at 882. The court held that, in contrast, “HOWMEDICA’s products utilize a permanent, threaded screw connection and interference fit to attach the base and stem extension that does not allow for radial adjustment.” Id. Claim 1 includes no radial adjustment requirement. The “radially adjustable” limitation appears only in claim 2. To the extent that the district court granted summary judgment of non-infringement of claim 2 because the accused infringing devices have connections that are “permanent,” rather than “radially adjustable,” it committed error. The Crowninshield affidavit states: “[T]he screw threads and locking ring of the stem mounting means 2 [of the accused infringing devices] allow[] the stem mounting means 2 to be radially adjustable in cooperation with the screw threads of the base mounting means 12.” (J.A. at 482.) This showing is sufficient to raise a genuine issue of material fact as to whether the accused infringing devices allow for radial adjustment, as required by claim 2.

E

Claim 1 includes a “stem mounting means for mounting the stem extension to the base mounting means” limitation. ’313 patent, col. 5, ll.22-23. The district court apparently also held that this language required that the base portion be “radially adjustable even after it is attached to the stem extension” and that the accused infringing devices did not infringe because they “utilize a permanent, threaded screw connection and interference fit to attach the base and stem extension that does not allow for radial adjustment.” Zimmer, 258 F. Supp. 2d at 882.

The parties agree that the “stem mounting means” limitation is a means plus function limitation such that the limitation covers the embodiments disclosed in the specification that perform this function and their equivalents. The structural feature in the specification that performs this function is the Morse taper. For example, Figure 2 of the ’313 patent shows a Morse taper with the mating pin on the stem extension and the recess on the base portion, while Figure 8 shows the recess on the stem extension, which mates with a corresponding pin on the base portion.

The accused devices here use a screw connection, rather than a Morse taper. Contrary to the appellant’s argument, a screw connection is not disclosed in the specification as performing this function. Instead, the only disclosure of a screw in the ’313 patent is not to replace the Morse taper, but to augment it: the specification merely states that “additional securing features could be utilized to further secure this tapered connection, such as a screw (not shown) which could connect through the base portion 10 into the pin 33 of the stem extension 1.” ’313 patent, col. 3, ll.52-56 (emphasis added).

Since the specification does not show a different connection as performing the stem mounting function, the issue is whether the screw connection is equivalent to the Morse taper for the purposes of section 112, paragraph 6. In support of the district court’s holding, the appellee argues that it is not equivalent because the screw connection is “permanent,” (Opening Br. for Def.-Appellee at 37), and therefore cannot perform the connection’s supposed required functions of (1) radial adjustability and (2) releasability during surgery. The appellee is wrong. To be an equivalent of the claimed means, the accused infringing means must merely perform the claimed function. Claim 1 does not include a “radial adjustability” or a “releasability during surgery” requirement. The mere fact that the Morse taper

performs these other functions in addition to the claimed function of “mounting the stem extension to the base mounting means,” does not require that any alleged equivalents also perform those functions to infringe claim 1.

With respect to the equivalence of the screw and Morse taper connections in performing the claimed stem mounting function, the district court held that “there is a substantial difference between the products in the way this [function] is accomplished.” Zimmer, 258 F. Supp. 2d at 884. However, the appellant supplied evidence that the Morse taper and screw connection are equivalent in an affidavit by Dr. Roy Crowninshield (“Crowninshield”), which states:

I am aware that the '313 Patent specifically discloses a Morse taper arrangement for mounting the stem extension to the base portion. However, I have seen a Morse taper arrangement used interchangeably with other types of connections, e.g., a threaded connection or an interference connection on the same types of devices. . . .

. . . By virtue of my training and experience, it is my opinion that one of ordinary skill in the art of developing and manufacturing orthopaedic implants would recognize that the pin and mating recess arrangement disclosed in the '313 patent is equivalent to the threaded screw connection with a locking ring of the [accused infringing] systems, and that such arrangements are interchangeable in this application.

(J.A. at 480.) Along with the Crowninshield affidavit, the appellant provided a brochure that shows a Morse taper connection and threaded connection being used interchangeably on a knee implant. This evidence is sufficient to raise a genuine issue of material fact as to whether the Morse taper and threaded connections are equivalent structure for the purpose of literal infringement of claim 1 under section 112, paragraph 6. Thus, there is no basis for the district court’s grant of summary judgment that the screw connection is not an equivalent of the claimed “stem mounting means for mounting the stem extension to the base mounting means.” '313 patent, col. 3, ll.22-23.

F

In construing the claims, the district court noted that “the stem extension is ‘releasably fixed’ to the base, which permits the system to be further adjusted during surgery to achieve a proper fit for each patient.” Zimmer, 258 F. Supp. 2d at 881. The “releasably fixed” limitation does not appear in claim 1, and it is not a requirement of claim 1. The appellee argues that claim 3, which requires that the

connection be “releasably fixed to the base portion,” ’313 patent, col. 5, l.37, requires that the connection be releasable during surgery. We agree with the appellee as to claim 3. The specification states that, when mounting the base portion to the stem extension, “[t]he surgeon would select the desired position for axis ‘B’ relative to the base portion 10, and then the stem extension 1 can be releasably fixed to the base portion 10 in the selected orientation.” *Id.*, col.3, ll.25-29 (emphases added). Thus, the connection must be releasable after the surgeon has selected the desired position for the stem extension axis, which occurs during surgery.

Nevertheless, the appellee’s argument that it does not infringe claim 3 because its connection is “permanent,” rather than “releasably fixed,” cannot prevail on summary judgment. The appellant raised a genuine fact dispute as to whether the accused infringing devices’ screw connections are in fact releasable during surgery. The Crowninshield affidavit states:

It is . . . my opinion that Howmedica’s stem extension is releasably fixed to the base portion in the selected orientation. Although Howmedica’s stem extension is connected to the base portion through the use of screw threads and a locking ring, the stem extension is still releasable by loosening the connection to select the desired orientation of the stem extension relative to the base portion.

(J.A. at 482 (emphasis added).) Such a showing is sufficient to raise a genuine issue of material fact as to whether the accused infringing devices’ connections are “releasably fixed.”

III

We decline at this time to construe other claim terms that may be in dispute. Nor is it appropriate for us on appeal to determine whether summary judgment of infringement should be granted. *See, e.g., Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 915 (Fed. Cir. 2004) (declining to direct the entry of summary judgment in favor of one party when reversing the grant of summary judgment in favor of the other).

CONCLUSION

For the foregoing reasons, the district court’s grant of summary judgment of noninfringement is reversed, and we remand this case to that court for further proceedings in accordance with this opinion.

COSTS

No costs.

[1] Claim 2 claims: “The system of claim 1 wherein the stem mounting means is radially adjustable in cooperation with the base mounting means so that the second axis of the elongated stem portion can be oriented in any one of a plurality of radial orientations with respect to the first axis.” ’313 patent, col. 5, ll.31-35.

[2] Claim 3 claims: “The system of claim 2 wherein the stem extension is releasably fixed to the base portion in the selected orientation.” ’313 patent, col. 5, ll.36-38.