01-1617 Page 1 of 9

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United States Court of Appeals for the Federal Circuit

01-1617, -1629

ZEVO GOLF COMPANY, INC.,

Plaintiff-Appellant,

v.

KARSTEN MANUFACTURING CORP. and PING, INC.,

Defendants-Cross-Appellants.

DECIDED: October 1, 2002

Before LOURIE, <u>Circuit Judge</u>, FRIEDMAN, <u>Senior Circuit Judge</u>, and PROST, <u>Circuit Judge</u>.

LOURIE, Circuit Judge.

DECISION

Zevo Golf Company, Inc. ("Zevo") appeals from the decision of the United States District Court for the Southern District of California granting Karsten Manufacturing Corp. and Ping, Inc. (collectively, "Ping") summary judgment of noninfringement. Zevo Golf Co. v. Karsten Mfg. Corp.,

01-1617 Page 2 of 9

No. 99-CV-2310 H, slip op. at 15 (S.D. Cal. July 12, 2001) ("Summary Judgment"). Ping cross-appeals from the court's decision granting summary judgment that Zevo has priority under 35 U.S.C. § 102(g), id. at 6, and that Zevo's patent is not invalid under 35 U.S.C. § 102 or 103, id. at 11, 12. Because the court did not err in granting summary judgment, we affirm.

DISCUSSION

Zevo is the owner of U.S. Patent 5,851,155, which is directed to a method for customizing golf clubs through the use of interchangeable hosels. A hosel is the part of a golf club that connects the shaft and the head. Variations in hosels can be used to vary lie and face angles,* allowing a club to be customized for the specific swing characteristics of an individual golfer. Claim 1 recites a hosel construction having a "plug member," which engages the club head, and a "neck member," which "extend[s] generally angularly relative to said plug member for engaging the shaft." '155 patent, col. 6, ll. 56-61. Claim 1 also requires a "boss portion disposed about an upper end of" the plug member for engaging a "reveal" portion. Id. at col. 7, ll. 4-5. Claim 7 recites a method for constructing a fitted golf club for a golfer whereby an interchangeable hosel having a specific angle between its neck and plug members is selected to achieve the desired lie and face angles. Claim 7 requires, inter alia, the steps of:

using . . . a plurality of hosel constructions, each . . . including a generally downwardly extending plug member [and] <u>a neck member extending generally angularly upwardly from said plug</u> . . . ; [and]

selecting one of said hosel constructions for coupling said shaft to said club head, said selected hosel construction having said neck member extending in said transverse dimension to position said shaft relative to said club head at said desired lie angle, and further having said neck member extending in said longitudinal dimension to position the club face at said desired longitudinal angle

Id. at col. 8, ll. 6-11, 16-23 (emphasis added). Claims 8 and 9 depend from claim 7.

Ping owns U.S. Patent 5,906,549, which is also directed to an interchangeable hosel design, and manufactures the TiSI driver. The hosel of the TiSI driver fits into the club head and has a linear bore extending the length of the hosel for engaging the shaft. The TiSI driver uses custom-fit hosels that vary lie and face angles by changing the orientation of the linear shaft bore.

01-1617 Page 3 of 9

Zevo brought suit against Ping, alleging that the hosel used in Ping's TiSI driver infringes claims 1 and 7-9 of the '155 patent. Ping counterclaimed, seeking a declaratory judgment of noninfringement and invalidity. Zevo filed motions for partial summary judgment that the '155 patent has priority over certain inventions of Ping, that the '155 patent is not invalid under 35 U.S.C. § 102 or 103, and that Ping infringes claim 7 of the '155 patent. Ping filed a motion for summary judgment of noninfringement and invalidity.

In an order dated July 12, 2001, the court construed the claims of the '155 patent. Zevo Golf Co. v. Karsten Mfg. Corp., No. 99-CV-2310-H (S.D. Cal. July 12, 2001). The court interpreted the phrase "plug member" to mean "the portion of the hosel construction which is used to secure and anchor the hosel to the club head," <u>id.</u> at 3, and the phrase "neck member" to mean "the shaft engaging portion of the hosel structure," <u>id.</u> at 4. The court construed the claims to require that "the neck member extend[] at an angle away from the plug [member]." <u>Id.</u> Additionally, the court interpreted the term "boss" in claim 1 to mean "a flange or projection above the general surface," <u>id.</u> at 5, and the term "reveal" to mean "a recessed area or depression encircling the perimeter of the opening of the hole into which the boss mates," <u>id.</u> at 6.

Also on July 12, 2001, the court issued an order granting in part and denying in part both Zevo's and Ping's motions for summary judgment. First, the court granted Zevo's motion for partial summary judgment that the '155 patent is entitled to priority over Ping's inventions under 35 U.S.C. § 102(g). The court treated Zevo as having established a priority date of July 30, 1997, based on the inventors' computer-assisted design drawings. Summary Judgment at 4. The court found Ping's evidence of an engineer's testimony, memoranda, and prototype testing insufficient to prove by clear and convincing evidence that it had conceived and reduced to practice its multiple-hosel design before July 30, 1997. Id. at 5-6.

Secondly, the court granted Zevo's motion for partial summary judgment that the '155 patent is not invalid under 35 U.S.C. § 102. The court found that published U.K. Patent Application 2,207,358 A, which is also directed to an interchangeable hosel design, does not anticipate claims 1 and 7 of the

01-1617 Page 4 of 9

'155 patent because its plug and neck members are in a straight line and therefore are not angularly related as claimed in the '155 patent. <u>Id.</u> at 9. Next, the court found that Ping had failed to show that published U.K. Patent Application 2,241,173 A discloses a boss and reveal as required by claim 1 of the '155 patent. <u>Id.</u> at 10. The court also found that U.S. Patent 5,839,973 does not anticipate the '155 patent because it does not disclose a hosel with neck and plug members and, even if it did, it fails to disclose an angular relationship between those members. <u>Id.</u> at 11.

Third, the court granted Zevo's motion for partial summary judgment that the '155 patent is not invalid under 35 U.S.C. § 103. Looking to the '358 application, the '173 application, and the '973 patent, the court concluded that Ping had failed to show by clear and convincing evidence that there was a suggestion or motivation to combine those prior art references to create the angled design of the '155 patent. <u>Id.</u> at 12.

Finally, the court granted Ping's motion for summary judgment of noninfringement. With respect to claim 1, the court found that the TiSI hosel does not literally infringe the '155 patent because it does not have either a boss or a reveal. Id. at 13. The court also found no infringement under the doctrine of equivalents because the boss and reveal limitations had been added during prosecution to overcome prior art. Id. With respect to claims 7-9, the court found that the TiSI hosel does not literally infringe because it lacks a separate plug member that engages the head, it lacks a neck member that is angularly related to a plug member, and it does not vary lie and face angles by pivoting the neck member from one hosel to another. Id. at 14. Moreover, the court found that the TiSI hosel does not infringe claims 7-9 under the doctrine of equivalents because such a finding would necessarily require the claims to encompass the prior art '358 application, which discloses a structure identical to that of the TiSI hosel with respect to the claim terms "plug member," "neck member," and "extending generally angularly upwardly." Id. at 15.

The district court made final its summary judgment order, Zevo Golf Co. v. Karsten Mfg. Corp., No. 99-CV-2310-H (S.D. Cal. Aug. 10, 2001), and Zevo timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

01-1617 Page 5 of 9

We review a district court's grant of summary judgment <u>de novo</u>, reapplying the same standard used by the district court. <u>Ethicon Endo-Surgery</u>, <u>Inc. v. U.S. Surgical Corp.</u>, 149 F.3d 1309, 1315, 47 USPQ2d 1272, 1275 (Fed. Cir. 1998). Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). "The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor." <u>Anderson v. Liberty Lobby</u>, <u>Inc.</u>, 477 U.S. 242, 255 (1986).

A determination of infringement requires a two-step analysis. "First, the court determines the scope and meaning of the patent claims asserted . . . [and secondly,] the properly construed claims are compared to the allegedly infringing device." Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc) (citations omitted). Step one, claim construction, is an issue of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71, 34 USPQ2d 1321, 1322 (Fed. Cir. 1995) (en banc), affd, 517 U.S. 370 (1996), that we review de novo, Cybor, 138 F.3d at 1456, 46 USPQ2d at 1172. Step two, comparison of the claim to the accused device, requires a determination that every claim limitation or its equivalent be found in the accused device. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). Those determinations are questions of fact. Bai v. L & L Wings Inc., 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998).

A determination that a patent is invalid as being anticipated under 35 U.S.C. § 102 requires a finding that "each and every limitation is found either expressly or inherently in a single prior art reference." Celeritas Techs., Ltd. v. Rockwell Int'l Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998). A determination that a patent is invalid for prior invention under 35 U.S.C. § 102(g) requires a showing of either prior reduction to practice or prior conception coupled with reasonable diligence in reducing the invention to practice. Mycogen Plant Sci. v. Monsanto Co., 243 F.3d 1316, 1332, 58 USPQ2d 1030, 1043 (Fed. Cir. 2001). A determination that a patent is invalid under 35 U.S.C. § 103 requires a finding that the claimed invention would have been obvious at the time of the invention to one of ordinary skill in the art. WMS Gaming, Inc. v. Int'l Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1396-97 (Fed. Cir. 1999). Because a patent issued by the PTO is presumed to be valid,

01-1617 Page 6 of 9

35 U.S.C. § 282 (2000), the evidentiary burden to show facts supporting a conclusion of invalidity is clear and convincing evidence, <u>WMS Gaming</u>, 184 F.3d at 1355, 51 USPQ2d at 1396-97.

On appeal, Zevo argues that the district court erred in finding as a matter of law that the TiSI hosel does not literally infringe claims 7-9 of the '155 patent. Specifically, Zevo contends that the TiSI hosel includes a plug member, but that the court, straying from its earlier claim construction, improperly required that the plug member be separate from the neck member and that it not engage the shaft. Zevo also asserts that the TiSI hosel has the requisite neck-plug angle but that the court improperly considered the relative angle of the linear bore within the TiSI hosel rather than the relative angle of the neck and plug members. Zevo further argues that the TiSI hosel adjusts lie and face angles by using different hosel inserts with various neck orientations as taught by the '155 patent and not by redrilling the shaft bore as taught by the prior art. Moreover, Zevo contends that the prior art does not preclude a finding of infringement under the doctrine of equivalents because, unlike the TiSI hosel, the hosel described in the '358 application is straight and varies lie and face angles by using identical hosels and then drilling the shaft bore at various angles.

Ping responds that its TiSI hosel does not have the claimed neck and plug members, instead consisting of just one member and having the entire hosel engage the club shaft. Ping also argues that the TiSI hosel does not have the claimed neck-plug angle because it lacks distinct neck and plug members and because it has a single end-to-end linear bore. Ping further asserts that the TiSI hosel varies lie and face angles by reorienting a linear shaft bore inside the hosel, not by pivoting a neck member from hosel to hosel as claimed in the '155 patent. Furthermore, Ping argues that its hosel does not infringe under the doctrine of equivalents because such a finding would encompass the prior art '358 application and because the TiSI hosel does not have equivalents of the '155 patent's plug member, neck member, and neck-plug angle limitations.

In addition, Ping conditionally cross-appeals the judgment that the '155 patent is invalid under 35 U.S.C. §§ 102 and 103. Namely, Ping argues that if claim 7 is construed to encompass the TiSI hosel, then the '155 patent is anticipated by the '358 application and the '973 patent and would have

01-1617 Page 7 of 9

been obvious in view of the '358 application, the '173 application, and the '973 patent. Finally, if the TiSI hosel is the same invention as that claimed in the '155 patent, Ping argues that it conceived and reduced its hosel design to practice before Zevo or, alternatively, that there is a material question of fact regarding priority of invention under 35 U.S.C. § 102(g).

Zevo does not challenge the district court's claim construction order. Zevo does, however, argue that the court deviated from its initial claim construction and misinterpreted claim terms in its summary judgment order. We find no error in the district court's interpretation of the claims at issue. Zevo's argument that the court incorrectly construed the claims to require "separate" plug and neck members is unpersuasive. The language of claim 7 clearly requires both a "plug member" and a "neck member," or two distinct members. The court's interpretation does not, as Zevo contends, exclude a preferred embodiment in which the hosel is machined in one piece; it only requires that the hosel, whether made in one or more pieces, have both a plug member and a neck member. Zevo's argument that the court's claim interpretation improperly required that the plug member not engage the shaft is equally unavailing. Claim 7 recites a method that includes the steps of "engaging said club head with said plug member" and "engaging said shaft with said neck member." '155 patent, col. 8, Il. 24-25. The '155 specification makes no reference to whether the plug member may also engage the shaft; nor did the court suggest that it could not. Consistent with the claim language and the specification, the court's interpretation only requires that the plug member engage the club head and that the neck member engage the shaft.

Having determined that the district court properly interpreted the claim terms at issue, we turn next to infringement. We agree with Ping that the court did not err in granting summary judgment that the TiSI hosel does not infringe claims 7-9 either literally or under the doctrine of equivalents. To begin with, the TiSI hosel does not have both a plug member and a neck member. Instead, it has only one member that fits into the club head and all of which engages the shaft. Even if, as Zevo argues, the portion inside the club head is a "plug member" and the exposed portion is a "neck member," the TiSI hosel lacks the requisite angle between those two portions. The district court found, and Zevo does not contest, that claim 7 requires the neck member to be at an angle relative to the plug member. The TiSI

01-1617 Page 8 of 9

hosel lacks that element because its structure is linear, having a linear shaft bore drilled through the entire length of the hosel. No matter how the bore is oriented, the alleged neck and plug members remain in a straight line. Moreover, the contouring of the TiSI hosel does not create an angle. The contouring simply removes exterior portions of the hosel to shape the hosel's appearance; it does not affect the linearity of the structure. With or without contouring, the structure of the TiSI hosel maintains its overall linear alignment. Furthermore, the TiSI hosel does not achieve variations in lie and face angles in the same manner as that claimed in the '155 patent. The customization method recited in claim 7 varies lie and face angles by altering the angle between the hosel's neck and plug members. In contrast, the TiSI hosel varies lie and face angles by changing the orientation of a linear shaft bore throughout the length of the hosel. It does not have, let alone alter, any angle of the hosel's constituent parts relative to one another. Thus, the district court did not err in concluding that there were no genuine issues of fact concerning literal infringement.

We also agree with Ping that the district court did not err in ruling as a matter of law that the TiSI hosel does not infringe the '155 patent under the doctrine of equivalents. The doctrine of equivalents cannot be applied to encompass prior art, K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1367, 52 USPQ2d 1001, 1007 (Fed. Cir. 1999), and like the TiSI hosel, the hosel described in the '358 application consists of a single linear member and adjusts lie and face angles by reorienting a linear bore located within the shaft. It follows that if claim 7 were to encompass the TiSI hosel by equivalents, then it would encompass the hosel disclosed in the '358 application as well. Because a finding of infringement under the doctrine of equivalents would impermissibly encompass the prior art, we conclude that the TiSI hosel does not, as a matter of law, infringe the '155 patent under the doctrine of equivalents. Accordingly, we affirm the district court's granting of summary judgment of noninfringement.

Ping frames its cross-appeal such that it only challenges the district court's anticipation and obviousness determinations "[i]f Claims 7-9 are interpreted to cover Ping's TiSI Driver." Similarly, it only challenges the court's priority determination "[i]f Ping's TiSI Driver is deemed to be the same invention as disclosed in the '155 Patent." Because Ping does not in its cross-appeal contest the '155

01-1617 Page 9 of 9

patent's validity if we construe claim 7 not to encompass the TiSI hosel and it is clear that the TiSI hosel is not the same invention as that claimed in the '155 patent, we do not address the underlying validity issues of anticipation, obviousness, and priority. There is no longer a case or controversy concerning validity.

Because the district court did not err in granting summary judgment that the '155 patent was not infringed by the TiSI driver, we affirm.

<u>*</u> Lie angle is the angle between the shaft and the ground when the club head is parallel to the ground. Face angle is the angle between the shaft centerline and a line parallel to the striking surface of the club.