

United States Court of Appeals for the Federal Circuit

99-1042

VEHICULAR TECHNOLOGIES CORPORATION,

Plaintiff-Appellant,

v.

TITAN WHEEL INTERNATIONAL, INC., DYNEER CORPORATION,

TRANSAMERICA AUTO PARTS COMPANY, INC.,

and LEON ROSSER AUTO SERVICE, INC.,

Defendants-Appellees.

Richard A. Killworth, Killworth, Gottman, Hagan & Schaeff, L.L.P., of Dayton, Ohio, argued for plaintiff-appellant. Of counsel on the brief were Ronald L. Johnston, James R. Farrand, and James S. Blackburn, Blanc Williams Johnston & Kronstadt, LLP, of Los Angeles, California.

Kent A. Herink, Davis, Brown, Koehn, Shors, & Roberts, P.C., of Des Moines, Iowa, argued for defendants-appellees. With him on the brief was Patricia L. Ades.

Appealed from: United States District Court for the Central District of California

Judge Alicemarie H. Stotler

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DECIDED: May 22, 2000

Before PLAGER, CLEVENGER, and RADER, Circuit Judges.

Opinion for the court filed PER CURIAM. Circuit Judge RADER concurs.

PER CURIAM.

The United States District Court for the Central District of California granted the motion of Titan Wheel International, Inc., Dyneer Corp., Transamerica Auto Parts Co., Inc., and Leon Rosser Auto Service, Inc. (collectively Tractech) for summary judgment of non-infringement of U.S. Patent No. 5,413,015 (the '015 patent), assigned to Vehicular Technologies Corporation (PowerTrax). Because the comparable assembly in the accused E-Z Locker product contains a single spring and a plug, the district court found that it cannot, as a matter of law, infringe the patented double-spring assembly. Because the record supports the district court's judgment, this court affirms.

I.

This court has previously addressed the issue of the spring limitation in the '015 patent in its earlier review of a preliminary injunction. See Vehicular Techs. v. Titan Wheel Int'l, Inc., 141 F.3d 1084, 46 USPQ2d 1257 (Fed. Cir. 1998) (Vehicular Tech.). As discussed in that decision, the '015 patent claims a locking differential for use in automobiles. The written description of the '015 patent set forth the basis for the invention:

[A] long-standing need has existed for a differential mechanism which permits assembly, maintenance and repair in both manufacture and installation to be as simple as possible so that the likelihood of problems is greatly reduced.

'015 patent, col. 1, ll. 45-49. In its review of the preliminary injunction, this court further explained the assembly problems addressed by the invention:

The spring-disk-pin design of the prior art created special installation problems. Many locking differentials are designed as after-market add-ons whose parts can be installed into an existing differential by a do-it-yourself backyard mechanic. However, there is very little space inside a differential to install all the parts. With the spring-disk-pin design, each small part had to be carefully inserted in the tight space between the drive plates and then repositioned, often using a prying tool and a hacksaw blade to hold the parts in place and the spring in a compressed position. The disks were particularly troublesome because they slid around on the end of the spring and often fell off or were lost during installation.

The '015 patent is directed toward an improved locking differential whose parts are easier to manufacture, install, and maintain than those of prior art locking differentials. The application for the '015 patent, filed June 28, 1993, and listing John Zentmyer (Zentmyer) as the inventor, focused on three main improvements: (1) window openings in the outside rims of the drive plates, (2) newly designed spring assemblies that use two concentric coil springs and a pin rather than a spring-disk-pin grouping, and (3) spring passageways with oblong cross-sections.

Vehicular Tech., 141 F.3d at 1086. Claim 1 of the '015 patent, representative of the claims at issue, recites:

1. A differential mechanism comprising:

output means;

driving means in spaced relationship to said output means;

driven means operably responsive to said driving means for powering said output means;

said driven means having a pair of clutch driving members coaxially disposed with respect to each other and having opposing spaced-apart surfaces faces;

biasing means interposed between said driving surface faces comprising at least a pin in alignment with a spring assembly consisting of two concentric springs bearing against one end of said pin;

said springs and said pin in axial alignment disposed in an elongated passageway jointly provided in each of said pair of clutch drive members;

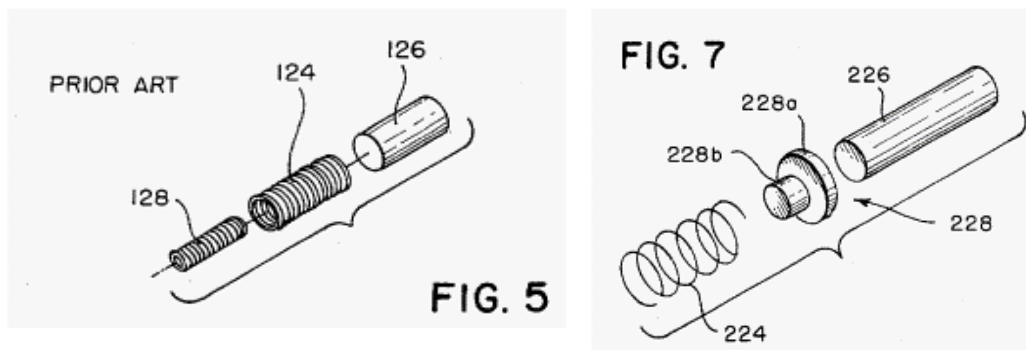
each of said clutch drive members has inspection and access

openings communicating with said passageway so as to expose said springs and said pins respectively; and

said spring passageway is of oblong configuration in transverse cross-section.

'015 patent, col. 4, l. 65 to col. 5, l. 30

Tractech's accused device includes all of the claim limitations except the "spring assembly consisting of two concentric springs bearing against one end of said pin." Tractech has substituted a single spring and a plug fitting into the spring for this limitation. One surface of Tractech's plug bears against one end of the pin. Figure 5 from Tractech's U.S. Patent No. 5,715,733 shows the concentric spring feature of the '015 invention – represented as prior art in Tractech's later patent – and Figure 7 from that patent illustrates Tractech's accused device:



In the prior art device of Figure 5, spring 128 fits within spring 124 and the two springs compress against pin 126. In Tractech's accused device of Figure 7, plug 228 fits within spring 224. The smaller-diameter part of the plug, 228b, is held inside single spring 224 while the larger-diameter part of the plug, 228a, bears against pin 226.

The district court initially granted PowerTrax's motion for a preliminary injunction, finding that PowerTrax had shown a reasonable likelihood of success in proving Tractech's spring-and-plug assembly equivalent to the claimed spring assembly. See Vehicular Tech., 141 F.3d at 1089. In reaching the conclusion that the accused device "performs the same functions, in substantially the same way, and accomplishes the same results," the district court had determined the functions of the patented spring assembly. In addition to the function stated in the claim – providing a biasing force – the district court also identified the two additional functions of "through the windows installation" and "the elimination of the loose disks in the original Lock-Right product." Id. In fact, the patent's "summary of the invention" mentions one primary objective of the invention ("simplif[ying] both the manufacture and installation of component parts") and five other objectives that the trial court aptly summarized in its recitation of the three functions of the claimed invention.

On appeal, this court vacated the preliminary injunction. In its analysis of the role played by each limitation in the context of the claim, see Warner-Jenkinson Co. v. Hilton-Davis Chem. Co., 520 U.S. 17, 40 (1997), this court found an additional function of the

claimed invention, beyond those found by the trial court, namely that of enhancing reliability. This additional function appeared within one of the five secondary objectives mentioned in the "summary of the invention" section of the '015 patent. Because this additional function is critical to this appeal, this court restates the references to this function in the specification of the patent:

SUMMARY OF THE INVENTION

. . . .

Another object of the present invention is to provide a differential mechanism wherein component parts of the assembly, such as clutch members, are joined together by a resilient means comprising a pair of oppositely-wound concentric springs bearing against a pin so that the strength of the spring and reliability of the resilient means are increased.

'015 patent, col. 2, ll. 14-20.

DESCRIPTION OF THE INVENTION

. . . .

[Because of the dual spring feature], should one spring break or become weakened, the mechanism will continue to function as the second spring will bear the load and prevent the broken spring from exiting the assembly.

Id., col. 4, ll. 26-29.

Thus, this court read the specification to endow the dual-concentric spring assembly with "the ability to stay centered on the end of the pin and to continue functioning" even when one spring breaks. See Vehicular Tech., 141 F.3d at 1091. This additional function – missing in the accused device on the basis of the preliminary injunction record – prevented this court from agreeing with the district court that PowerTrax had a reasonable likelihood of success on its claim of infringement under the doctrine of equivalents. Although an accused device could conceivably lack an insignificant function of a single claim limitation and still be only insubstantially different than the claimed invention, this court found that possibility unlikely in this case on the preliminary injunction record. See id. (absence of the "key" reliability enhancement function in the accused device "strongly suggest[s] that the spring-plug structure is more than insubstantially different from the claimed spring assembly"). Thus, this court properly retained the focus on "whether the captured plug in the accused device can be a substantial equivalent to the claimed inner spring." Id. at 1089.

On remand, the district court, after hearing additional evidence, granted Tractech's motion for summary judgment. The trial court reasoned that "the patent contains unmistakable assertions disavowing all devices without a double-spring assembly." Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc., No. SA CV 96-216 AHS (Eex), slip op. at 7 (C.D. Cal. Sept. 21, 1998). Further the trial court stated: "[T]he term 'consisting of' in the relevant claim language precludes the application of the doctrine of equivalents to

include a device which contains only one spring." Id. PowerTrax appeals the district court's decision.

II.

This court reviews the district court's summary judgment ruling de novo, reapplying the summary judgment standard. See Conroy v. Reebok Int'l, Ltd., 14 F.3d 1570, 1575, 29 USPQ2d 1373, 1377 (Fed. Cir. 1994). This court also reviews the district court's claim construction without deference. See Cybor Corp. v. FAS Tech., Inc., 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc). This court affirms a summary judgment ruling when the record shows no genuine issues of material fact and entitlement to judgment as a matter of law for the moving party. See Fed. R. Civ. P. 56(c). In reviewing the district court's summary judgment decision in favor of Tractech, this court draws reasonable inferences from the evidence in favor of the non-movant, Powertrax. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986). Moreover an asserted issue of material fact is not "genuine" in the sense of Fed. R. Civ. P. Rule 56 if a reasonable jury could only resolve the question for the moving party. See id. at 248.

In assessing issues of material fact to determine whether a "reasonable jury" could disagree on them, this court identifies facts posing a potential dispute and then examines those facts in the context of the legal criteria by which a fact finder would resolve the dispute. The only material facts potentially in dispute in this case involve the question of whether Tractech's spring-plus-plug, which bears against the end of a pin, infringes under the doctrine of equivalents the claimed "spring assembly comprising two concentric springs bearing against one end of said pin."

Infringement under the doctrine of equivalents requires an intensely factual inquiry. See Warner-Jenkinson, 520 U.S. at 37; Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U. S. 605, 609 (1950). And, this court is well aware of the difficulty of granting summary judgment motions on issues requiring delicate balancing of many factual components. See, e.g., Howes v. Medical Components, Inc., 814 F.2d 638, 643, 2 USPQ2d 1271, 1273 (Fed. Cir. 1987); D.M.I., Inc v. Deere & Co., 755 F.2d 1570, 1573, 225 USPQ2d 236, 238 (Fed. Cir. 1985); Yuba Goldfields Inc. v. United States, 723 F.2d 884, 887 (Fed. Cir. 1983). Ultimately this court may sustain summary judgment of non-infringement under the doctrine of equivalents, where that doctrine is legally applicable, only if it discerns no genuine issues of material fact and that no reasonable jury could find equivalence. See Warner- Jenkinson, 520 U.S. 17, at 39 n.8. This standard sets a high hurdle which this court does not lightly attempt to surmount. Thus, the question in this proceeding is different than that addressed in Vehicular. In this review, this court must examine the record for genuine issues of material fact and must determine that no reasonable jury could reach a different conclusion.

Infringement – either literal or by equivalents – depends on the meaning and scope of the claimed invention. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976, 34 USPQ2d 1321, 1326 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370, 38 USPQ2d 1461 (1996). In Vehicular, this court interpreted the claims and then turned its attention to the central question of infringement under the doctrine of equivalents. As noted earlier, this task led this court to consider the role of each limitation in the claimed combination. In

considering the "two concentric springs" limitation, this court determined that one important function of the limitation was improving reliability. This court characterized the patent's reliability enhancement function as "the key backup function." Vehicular, 141 F.3d at 1091. If this function is "key," an accused device which does not perform this central function could rarely, if ever, be considered to be insubstantially changed from the claimed invention. PowerTrax contends that the summary judgment record contains a significant issue about the importance of the objective of reliability.

The record does contain some evidence that inventors and artisans of ordinary skill discounted the importance of the reliability objective. For example, the designer of Tractech's accused product did not list redundancy or reliability as a function of the two-spring design. Indeed, Tractech's effort to design around the invention does not document any reliability function for the concentric spring feature. The inventor of the '015 product later disavowed the "increased reliability" objective, asserting that his objectives included only those relating to ease of assembly and expense of manufacture. This court must inquire whether this evidence creates a genuine issue of material fact or suffices to permit a reasonable jury to discount the importance of the reliability function and find infringement.

This court agrees with the district court that this record does not create a genuine issue of material fact, for several reasons. The specification of the '015 patent, as noted above, mentions "reliability of the resilient means" as "[a]nother objective" – listed first after the "primary object" of simplifying manufacture and installation. Further, as already noted, the specification discusses that the claimed invention with two springs will "continue to function" after one spring breaks. In other words, the extrinsic evidence invoked by PowerTrax to show a potential issue of fact relating to the importance of the reliability issue does not trump the clear disclosures and assertions in the patent itself. This court's assessment of this same extrinsic evidence in the preliminary injunction review shows that this evidence is insufficient to create a genuine issue of material fact:

[W]e reject PowerTrax's argument that undisputed testimony from both parties' witnesses established that the cap of the E-Z Locker is equivalent to the spring assembly claimed in the '015 patent. First, we are not persuaded by the litigation-induced pronouncements of the inventor, Zentmyer, and other PowerTrax witnesses, because the written description clearly states the importance of the back-up function performed by the claimed dual spring assembly. . . . Second, much of the cited testimony by Tractech employees is not directed to the back-up function of the inner spring. This testimony, which PowerTrax submitted as admissions of equivalence, does not speak directly to the issue of equivalence of the claim limitations, but rather speaks to the overall structure and function of the E-Z Locker differentials. . . . Finally, to the extent that Tractech employees may have testified that they did not believe a back-up spring was necessary for satisfactory performance, that testimony is contradicted by the clear statements to the contrary in the '015 patent.

Vehicular, 141 F.3d at 1092.

Turning to the question of whether no reasonable jury could find infringement by

equivalents, this court notes that the range of equivalents cannot be divorced from the scope of the claims. See Warner-Jenkinson, 520 U.S. at 40. The claim language expressly requires two springs. Moreover the patent drafter underscored this limitation with the introductory phrase "consisting of." The phrase "consisting of" is a term of art in patent law signifying restriction and exclusion, while, in contrast, the term "comprising" indicates an open-ended construction. See Parmelee Pharm. Co. v. Zink, 285 F.2d 465, 469, 128 USPQ 271, 275 (8th Cir. 1961); John Landis, Mechanics of Patent Claim Drafting 11-13 (1974). In simple terms, a drafter uses the phrase "consisting of" to mean "I claim what follows and nothing else." A drafter uses the term "comprising" to mean "I claim at least what follows and potentially more." In this case, the drafter limited the claim to two concentric springs and nothing else.

As this court noted in Vehicular, the drafter's choice of the phrase "consisting of" does not foreclose infringement under the doctrine of equivalents. This court clarified in Vehicular that "the claims specifically require that an infringing device consist of two springs (either literally or equivalently)." Vehicular, 141 F.3d at 1092. Nonetheless the term "consisting of" emphasizes the claim's specific limitation to a concentric spring structure. To determine whether the spring-plug assembly infringes the two-spring limitation under the doctrine of equivalents, a jury would consider evidence of insubstantial differences. To put that evidence in context, the jury would consult the claim language with its claimed feature of two concentric springs. No reasonable jury could find infringement by equivalents in these accused devices when the claim requires "two concentric springs" or a structure insubstantially different from that. Thus, for all the reasons stated above, this court agrees with the trial court's award of summary judgment.

COSTS

Each party shall bear its own costs.

AFFIRMED.

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RADER, Circuit Judge, concurring.

This case presents the difficult problem of performing a doctrine of equivalents analysis on the limited facts available for a motion of summary judgment. However, because this case fits well within this court's reasoning in Sage Products, Inc. v. Devon Industries, 126 F.3d 1420, 44 USPQ2d 1103, (Fed. Cir. 1997), I concur.

In Sage,

[t]he case raise[ed] the question of why the law restricts application of the doctrine of equivalents without further fact finding in some cases, see, e.g., Conopco, Inc. v. May Dep't Stores Co., 46 F.3d 1556, 1562, 32 USPQ2d 1225, 1228 (Fed. Cir. 1994)]; Dolly, 16 F.3d at 400, 29 USPQ2d at 1771, while in other cases the law imposes no such restriction, see, e.g., Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 114 F.3d 1161, 1163-64, 43 USPQ2d 1152, 1154-55 (Fed. Cir. 1997) (in banc) (after remand from the Supreme Court; order permitting factual analysis of equivalence to stand). The claim at issue define[d] a relatively simple structural device. A skilled patent drafter would foresee the limiting potential of the "over said slot" limitation. No subtlety of language or complexity of the technology, nor any subsequent change in the state of the art, such as later-developed technology, obfuscated the significance of this limitation at the time of his incorporation into the claim. See, e.g., Pennwalt, 833 F.2d at 938, 4 USPQ2d at 1742 ("[T]he facts here do not involve later-developed computer technology which should be deemed within the scope of the claims to avoid the pirating of an invention."). If Sage desired broad patent protection for any container that performed a function similar to his claimed container, it could have sought claims with fewer structural encumbrances. Had Sage done so, then the Patent and Trademark Office (PTO) could have fulfilled his statutory role in helping to ensure that exclusive rights issue only to those who have, in fact, contributed something new, useful, and unobvious. Instead, Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents. However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of his failure to seek protection for this foreseeable alteration of his claimed structure.

Sage, 126 F.3d at 1425.

In this case as in Sage, a skilled patent drafter would readily foresee the limiting potential of the "consisting of two concentric springs" limitation. Again, the drafter would not confront the need for particularly subtle or ambiguous language to describe inventive features that are complex, or were never described before in scientific discourse. Moreover, this limitation does not call into question issues of after-arising technology which, by definition, cannot be foreseen at the time of claim drafting. Here, a skilled patent drafter could have reasonably foreseen potential substitutes for two concentric springs, such as the accused spring and plug structure, but nonetheless

chose limited claim terms. In such a case as this, this court does not employ the doctrine of equivalents to alter the limitations the drafter chose to prosecute in the Patent and Trademark Office.

In this case, the principles enunciated in Sage are particularly applicable because the patent owner learned of the alleged infringement within the two-year period allowed for reissuing a patent under 35 U.S.C. § 251 (1994). Section 251 permits a patentee, who "through error without any deceptive intent . . . claim[s] more or less that he had a right to claim," to enlarge the patent claims within two years of the grant of the original patent. Id.; Hewlett-Packard Co. v. Bausch & Lomb, Inc., 882 F.2d 1556, 1564, 11 USPQ2d 1750, 1757 (Fed. Cir. 1989). Within the two year period, the patentee in this case chose to enforce his patent, with its narrow "consisting of two concentric springs" limitation, with a motion for a preliminary injunction, rather than choosing to enlarge the patent's claims to cover a spring and plug substitute. This additional circumstance focuses attention again on the reasoning of Sage: "[A]s between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of his failure to seek protection for this foreseeable alteration of its claimed structure." Sage, 126 F.3d at 1424. Thus, as in Sage, this case fits the circumstances for restricting the application of the doctrine of equivalents without further fact finding.