

United States Court of Appeals for the Federal Circuit

96-1557

VEHICULAR TECHNOLOGIES CORPORATION,

Plaintiff-Appellee,

v.

TITAN WHEEL INTERNATIONAL, INC., DYNEER CORPORATION,

TRANSAMERICA AUTO PARTS COMPANY, INC. and LEON ROSSER AUTO

SERVICE, INC.,

Defendants-Appellants.

Ronald L. Johnston, Blanc Williams Johnston & Kronstadt, LLP, of Los Angeles, California, argued for plaintiff-appellee.

Donald R. Dunner, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC, argued for defendants-appellants. With him on the brief were Barbara C. McCurdy, J. Michael Jakes, and Richard L. Rainey.

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

Judge Stotler

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TITAN WHEEL INTERNATIONAL, INC., DYNEER CORPORATION, TRANSAMERICA AUTO PARTS COMPANY, INC., and LEON ROSSER AUTO SERVICE, INC.,

Defendants-Appellants.

DECIDED: April 7, 1998

Circuit Judges.

Opinion for the court filed by Circuit Judge CLEVINGER. Dissenting opinion filed by Circuit Judge NEWMAN.

CLEVINGER, Circuit Judge.

In this patent infringement action relating to automotive locking differentials, the United States District Court for the Central District of California granted a preliminary injunction to Vehicular Technologies Corporation (PowerTrax). The court's order, based on infringement under the doctrine of equivalents, enjoined Titan Wheel International, Inc., Dyneer Corp., Transamerica Auto Parts Co., Inc., and Leon Rosser Auto Service, Inc. (collectively Tractech), from making, using, or selling allegedly infringing differentials, and ordered a recall of all differentials in the possession of Tractech's distributors. Having previously stayed the preliminary injunction pending appeal, we now decide that the district court erred in concluding that PowerTrax had a reasonable likelihood of success in establishing infringement under the doctrine of equivalents. We therefore vacate the grant of a preliminary injunction and remand.

I

PowerTrax is the assignee of U.S. Patent No. 5,413,015 (the '015 patent). PowerTrax and Tractech compete in the market for automatic locking differentials for use in automotive vehicles. An automotive axle is typically split into two half-axles with a differential located between the two half-axles. The differential allows the wheels on opposite sides of the vehicle to spin at different rates (for example, while the vehicle is rounding a corner). A normal open differential applies equal torque to each wheel, which can create a problem when a wheel encounters icy conditions. Because the wheel on ice needs very little torque before it spins, that same low torque is delivered to the other wheel. Even if the other wheel has traction, it may not receive enough force to move the vehicle, and the vehicle will be stuck, requiring engine revving, rocking, pushing, or towing to get moving.

A locking differential is one type of device that addresses this torque transfer problem. When one wheel slips, a locking differential shifts all of the available drive force to the wheel that has traction. A locking differential accomplishes this feat with two sets of toothed rotating clutch plates: a set of drive plates and a set of driven plates. An exploded view of a locking differential that is representative of the prior art, as depicted by consent of the parties in Exhibit C at page A1134 of the appellate joint appendix, is pictured below:

In this locking differential, the drive plates (referred to as "Drivers" in the figure) are mounted back-to-back with their toothed surfaces facing outward. Under the force from multiple bias springs, the drive plates push away from each other and against the toothed surfaces of the driven plates (referred to as "Couplers" in the figure), which are attached to each half-axle of the vehicle. In the prior art, as pictured, each bias spring had one end fitted into a hole (not shown) in the back of a drive plate and an opposite end in contact with a thin disk (referred to as a "Disc" in the figure). The disk in turn contacted a stop pin inserted in a corresponding hole (not shown) in the back of the other drive plate. The holes held the spring and pin in place, and the disk helped the spring to rest properly against the end of the pin. Thus, multiple spring-disk-pin assemblies located between the drive plates and near the plates' edges coupled the opposing inner surfaces of the drive plates to each other and provided a biasing force which pushed the drive plates apart.

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. The focus of this appeal is on the patent's replacement of the spring-disk-pin grouping with two concentric springs.

In the patented device, the pins are inserted in the holes in the back of the drive plates before the drive plates are mounted in the differential case. After the drive plates are in place, the pins are slid into position and a spring is compressed and inserted through each window opening into the spring hole at the end of each pin. The windows permit easier installation, and the substitution of an inner spring for the old disk eliminates the problem of lost disks. The inner spring also creates a surface for the pin to ride on, thereby functioning like the eliminated disk. Finally, the inner spring produces extra biasing force in addition to that provided by the outer spring and serves as a backup if the outer spring should break.

PowerTrax introduced the new design in 1993 as the Lock-Rite locking differential, two years before the '015 patent issued. Tractech reverse-engineered the Lock-Rite and copied the design into a product known as the E-Z Locker. At an October 1995 industry trade show where Tractech introduced the E-Z Locker, PowerTrax first notified Tractech of the '015 patent and its belief that the E-Z Locker infringed the patent. Tractech's Director of Engineering, working from the trade show and with assistance from Tractech's patent counsel, immediately developed two modifications of the E-Z Locker. First, he replaced the inner spring of the two spring assembly with a single spring and a plug stuck in one end of the spring. Second, he eliminated small holes around the periphery of the drive plates that led to the pin passageways.

The spring assemblies of the prior art, Fig. 5 of the '015 patent, and the accused E-Z Locker device, as respectively depicted by consent of the parties in Exhibits C, A, and O, at pages A1134, A1513, and A1715 in the appellate joint appendix, are shown below:

Prior Art '015 Patent E-Z Locker

On March 1, 1996, PowerTrax sued Tractech for patent infringement, trade dress infringement, misappropriation of trade secrets, breach of contract, and promissory estoppel. PowerTrax filed a motion for a preliminary injunction on all of its claims, but restricted its infringement argument to infringement under the doctrine of equivalents. Limiting its ruling to the patent infringement claim, the district court granted PowerTrax's motion and issued a preliminary injunction. The injunction enjoined Tractech from making, using or selling, or causing to be made, used, or sold, Tractech's E-Z Locker locking differential, any automatic positive locking differential mechanism substantially similar or otherwise equivalent to PowerTrax's Lock-Right locking differential, or any product that infringes the '015 patent. It also ordered Tractech to

“recall all E-Z Locker products in the possession of its distributors.” This court stayed the preliminary injunction pending this appeal, over which we have jurisdiction pursuant to 28 U.S.C. § 1292(c)(1) (1994).

II

“The grant or denial of a preliminary injunction pursuant to 35 U.S.C. § 283 is within the discretion of the district court.” Novo Nordisk of N. Am. v. Genentech, Inc., 77 F.3d 1364, 1367, 37 USPQ2d 1773, 1775 (Fed. Cir. 1996) (Novo Nordisk I). “An abuse of discretion may be established by showing that the court made a clear error of judgment in weighing relevant factors or exercised its discretion based upon an error of law or clearly erroneous factual findings.” Id.

As the moving party, PowerTrax had to establish its right to a preliminary injunction in light of four factors: (1) a reasonable likelihood of success on the merits; (2) the irreparable harm if preliminary relief is not granted; (3) the balance of hardships tipping in its favor; and (4) the impact of the injunction on the public sector. Reebok Int’l Ltd. v. J. Baker, Inc., 32 F.3d 1552, 1555, 31 USPQ2d 1781, 1783 (Fed. Cir. 1994). PowerTrax had to establish both of the first two factors, i.e., likelihood of success and irreparable harm, to receive a preliminary injunction. Id. To establish a likelihood of success on the merits, PowerTrax must show that, in light of the presumptions and burdens that will inhere at trial on the merits, (1) it will likely prove that Tractech infringes the ‘015 patent, and (2) its infringement claim will likely withstand Tractech’s challenges to the validity and enforceability of the ‘015 patent. See Genentech, Inc. v. Novo Nordisk, A/S, 108 F.3d 1361, 1364, 42 USPQ2d 1001, 1003 (Fed. Cir.) (Novo Nordisk II), cert. denied, 118 S. Ct. 397 (1997). Only infringement is at issue on appeal.

An infringement analysis involves two steps. The claim scope is first determined, and then the properly construed claim is compared with the accused device to determine whether all of the claim limitations are present either literally or by a substantial equivalent. Young Dental Mfg. Co. v. Q3 Special Prods., Inc., 112 F.3d 1137, 1141, 42 USPQ2d 1589, 1592 (Fed. Cir. 1997). Claim construction begins, as it must, with the words of the claims. See Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 619-20, 34 USPQ2d 1816, 1819 (Fed. Cir. 1995). In this case, claim 1 is representative (emphasis added):

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 driving means having a pair of clutch driving members coaxially disposed with respect to each other and having opposing spaced-apart surface 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.

Claims 2-4, the remaining claims, differ slightly from claim 1, but all require the claim limitation: “a spring assembly consisting of two concentric springs bearing against one end of said pin.”

We focus on the “spring assembly” limitation because if that limitation cannot be found in the E-Z Locker locking differentials, either literally or by equivalence, as a matter of law there can be no infringement. See Pennwalt Corp. v. Durand-Wayland Inc., 833 F.2d 931, 935, 4 USPQ2d 1737, 1739 (Fed. Cir. 1987) (in banc). For purposes of its motion for preliminary injunction, PowerTrax admitted that the limitation is not literally met by the E-Z Locker locking differential because the E-Z Locker employs a spring and a plug, rather than two concentric springs as the claims require. PowerTrax nonetheless argued before the district court, and argues again on appeal, that the plug in the E-Z Locker is an equivalent to the inner spring claimed in the ‘015 patent. The issue before us, based on the record in front of the district court, is whether PowerTrax has demonstrated a reasonable likelihood of success on the infringement issue.

III

Before the district court, the parties fundamentally disagreed on how the court should address and resolve the equivalents issue. Tractech argued that the claim language itself, properly understood, generally informs and, in this case, limits the range of equivalents available to the spring assembly limitation. According to Tractech, the pertinent claim limitation can be met under the doctrine of equivalents only by structure equivalent to two concentric springs, and that Tractech’s plug—a simple improvement of the prior art pesky disk—is not the equivalent of the second spring added to the prior art by the ‘015 patent.

PowerTrax instead framed the issue before the district court as follows:

The question isn’t what the claim[s] say, and the question isn’t whether it [the accused product] looks different. The question is what are the qualitative attributes or characteristics of what they’ve done and are they the same. Do they capture the heart of the invention and just mimic the invention in order to get around the language of the patent.

PowerTrax thus sought to direct the district court’s attention away from the language of the claims and toward a more general comparison of the overall attributes of the accused device with those of the claimed device.

We read the district court’s findings of fact and conclusions of law, entered to support its order, to have avoided the erroneous course urged on it by PowerTrax. Instead, the district court kept its focus on the claim language, reading in the claim “a new type of spring assembly designed to be installed through the window and eliminate certain loose or unattended ‘disks’ in the original Lock-Right product.” Because the claimed structure performs certain functions, the district court, in considering the doctrine of equivalents, correctly sought to ascertain the functions identified with the claimed two spring assembly. More specifically, for purposes of its doctrine of equivalents analysis, the district court held that the patent claims a:

spring assembly [that] includes an outer spring and a captured inner-spring. The functions of the spring

assembly in the patented invention are: (i) the provision of biasing force to engage the driver and coupler; (ii) through the windows installation; and (iii) the elimination of the loose disks in the original Lock-Right product.

Turning its focus to the accused device, the district court noted that Tractech substitutes a “captured inner plug” for the captured inner spring claimed in the patent, and concluded that Tractech’s spring assembly (spring-plus-plug) “accomplishes the same functions, in substantially the same way, with the same result, as the Lock-Right assembly.” Consequently, on August 30, 1996, the district court entered its preliminary injunction against Tractech, from which a timely appeal was taken to this court.

IV

In its brief and at oral argument, Tractech emphasizes that its captured plug can be a substantial equivalent, for doctrine of equivalents purposes, of the claimed captured inner spring limitation, only if the plug performs the same or substantially the same functions of the inner spring in substantially the same way, to produce substantially the same result. In this respect, Tractech correctly states the law, and PowerTrax speaks not to the contrary. As the Supreme Court recently stated: “Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.” Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 117 S. Ct. 1040, 1049, 41 USPQ2d 1865, 1871 (1997); see also Pennwalt Corp., 833 F.2d at 935, 4 USPQ2d at 1739. Consequently, a claim is infringed only if each limitation in the claim is found in the accused device, either literally or by a substantial equivalent. The focus in this case is on the question of whether the captured plug in the accused device can be a substantial equivalent to the claimed inner spring.

To answer that question, we follow the guidance given by the Supreme Court in Warner- Jenkinson:

An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.

117 S. Ct. at 1054, 41 USPQ2d at 1875. In other words, if a claim limitation must play a role in the context of the specific claim language, then an accused device which cannot play that role, or which plays a substantially different role, cannot infringe under the doctrine of equivalents. The question of whether an explicit function has been identified with a claim limitation entails an examination of the claim and the explanation of it found in the written description of the patent. See Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc., 98 F.3d 1563, 1574, 40 USPQ2d 1481, 1489-90 (Fed. Cir. 1996) (examining written description to ascertain functions identified with a claim limitation); cf. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1773, 1577 (Fed. Cir. 1996) (stating that the written description is “always highly relevant” in construing a claim, and that “it is the single best guide to the meaning of a disputed term”).

In some cases, the patent's prosecution history also may reveal the identification of a specific function relating to claimed structure. This may result from an amendment to claim language that was made to overcome, for example, a prior art rejection by the examiner. In such cases, the judicial analysis of whether structure and its associated function has been surrendered is conducted under the rubric of prosecution history estoppel. This, however, is not such a case, because PowerTrax did not amend the claims of the '015 patent insofar as the spring assembly limitation is concerned.

The available scope of protection of a patent under the doctrine of equivalents is not, however, limited solely by prosecution history estoppel, the continuing vitality, rigors, and parameters of which the Supreme Court addressed in its Warner-Jenkinson decision. In addition, a separate body of case law confirms that a patentee may otherwise lose the right to assert coverage of allegedly equivalent structure or matter. The case law to which we refer establishes that, through statements made during prosecution of a patent application, it can become evident that an asserted equivalent is beyond coverage under the doctrine of equivalents. See, e.g., Gentry Gallery, Inc. v. Berkline Corp., Nos. 97-1076, -1104, -1182 (Fed. Cir. Jan. 27, 1998) (arguments made in Petition to Make Special limit the range of equivalents); Tanabe Seiyaku Co. v. United States Int'l Trade Comm'n, 109 F.3d 726, 732, 41 USPQ2d 1976, 1981-82 (Fed. Cir.) (statements made during prosecution demonstrated that ketone solvents other than acetone could not be asserted as equivalents), cert. denied, 118 S. Ct. 624 (1997); Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1304, 41 USPQ2d 1364, 1368 (Fed. Cir. 1997) (grounding denial of asserted equivalent on statement made in information disclosure statement); Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1107, 39 USPQ2d 1001, 1006 (Fed. Cir. 1996) (patentee barred from asserting as an equivalent subject matter that was unmistakably disclosed, but not claimed in patent application), cert. denied, 117 S. Ct. 1244 (1997); Applied Materials, 98 F.3d at 1574, 40 USPQ2d at 1489-90 (written description demonstrated that a certain function must be performed by claimed process, and accused process that did not perform that function could not be asserted as an equivalent); Texas Instruments Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174, 26 USPQ2d 1018, 1025 (Fed. Cir. 1993) (unmistakable assertions made by the applicant preclude assertion of equivalency).

V

In this case, the written description makes clear a function of the spring assembly that was not addressed by the district court when it considered PowerTrax's preliminary injunction motion. Only two pages long, the written description emphasizes repeatedly the capacity of the inner spring to serve as a back-up, or replacement, or redundancy for the outer spring in the event of the outer spring's failure, as a significant betterment over the prior art. For example, in the Brief Description of the Prior Art in the BACKGROUND OF THE INVENTION, the patent states:

[P]roblems and difficulties have been encountered with the above conventional construction [i.e., prior art] which stems largely from the fact that the use of conventional single spring interfacing means and pin interconnection between clutch members is difficult and cumbersome to manufacture, install and maintain. This stems largely from the fact that the single compression spring construction sometimes fails and it is difficult to replace or repair broken or damaged springs.

Col. 1, lines 31-39. In the SUMMARY OF THE INVENTION, the patent notes that the dual spring feature increases both the strength and the reliability of the biasing means, col. 2, lines 14-20, and states that "[a]nother object of the present invention resides in the replacement of the single spring arrangement in the conventional differential mechanisms with an assembly composed of two oppositely-wound concentric springs," col. 2, lines 26- 29. The statements continue in the DESCRIPTION OF THE PREFERRED EMBODIMENT:

Referring to FIG. 5, it can be seen that the resilient means takes the form of a pair of springs **33** and **34** which are concentric with respect to one another since the spring of smaller diameter, represented by number **33**, is inserted into the hollow of the spring **34**. Therefore, 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.

Col. 4, lines 21-29.

The statements just quoted indicate that the concentric spring assembly is characterized by its ability to stay centered on the end of the pin and to continue functioning when the outer spring breaks (*i.e.*, it performs a back-up function). The statements clearly inform a reader of the patent about the role played by the inner spring and the scope the patentee intended his patent to cover. They affect the interpretation of the patent given by the patent examiner in determining whether the claims are patentable over the prior art and by competitors attempting to avoid infringement; likewise, they must affect the range of equivalents allowed by the court. As we have previously held, “[o]ther players in the marketplace are entitled to rely on the record made in the Patent Office in determining the meaning and scope of the patent.” Lemelson v. General Mills, Inc., 968 F.2d 1202, 1208, 23 USPQ2d 1284, 1289 (Fed. Cir. 1992). The spring-plug structure of the accused E-Z Locker product is entirely incapable of performing the key backup function, thus strongly suggesting that the spring-plug structure is more than insubstantially different from the claimed spring assembly. See Applied Materials, 98 F.3d at 1574, 40 USPQ2d at 1489 (holding that the claimed “cold purge process,” understood in the light of the written description, requires a function which is not performed by the accused device). Furthermore, the capacity of the inner spring to create a surface for the pin to ride on, a function stressed by PowerTrax on appeal, is performed in a different way by the accused spring-plug structure. Similarly, the accused spring-plug structure eliminates the pesky disk problem, another recited function for the inner spring, in a different way. Thus, on the record before us, there exists a substantial likelihood that the spring-plug structure is substantially different than the claimed spring assembly. Consequently, we conclude that the district court committed reversible error in determining that PowerTrax had a reasonable likelihood of success on the merits of proving that Tractech infringes under the doctrine of equivalents.

In an echo of its arguments in the trial court, PowerTrax argues that reaching such a conclusion requires the application of linguistic chicanery that rends the heart from Zentmyer's true invention and permits Tractech to escape infringement by the simple substitution of a plug for a spring. This is not a case, however, in which the true invention as claimed is overwhelmed by unnecessary semantic literalism. Rather, multiple statements in the written description itself speak to the role of the spring assembly limitation. The patent announces a function desired by the patentee, namely spring back-up. It touts the benefit of the dual spring assembly claimed in the patent as compared to assemblies with only one spring. As for the purported ease with which Tractech may have designed around this patent, that result was invited by the language used by the patentee to define his claim.

Furthermore, our emphasis on the statements made in the written description does not result in the fabrication, from the preferred embodiment, of a limitation not otherwise in the claim. See Constant v. Advanced Micro-Devices Inc., 848 F.2d 1560, 1571, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988) (“Although the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.”). Instead, the claims specifically require that an infringing device consist of two springs (either literally or equivalently). Thus, the question here is whether the plug of the accused devices is insubstantially different than the captured inner spring in the claimed device. Here, the “spring assembly” claim limitation itself has functions which it performs, and those functions are stated in the written description. A doctrine of equivalents inquiry requires

"[a]n analysis of the role played by each element in the context of the specific patent claim," Warner Jenkinson, 117 S. Ct. at 1054, 41 USPQ2d at 1875; otherwise, the inquiry could easily result in a wholesale vitiation of a recited claim limitation, see id. at 1053 n.8, 41 USPQ2d at 1875 n.8 ("Thus, under the particular facts of a case, . . . if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further material issue for the jury to resolve.").

Finally, we 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. Cf. Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1580, 38 USPQ2d 1126, 1130 (Fed. Cir.) ("Markman requires us to give no deference to the testimony of the inventor about the meaning of the claims."), cert. denied, 117 S. Ct. 275 (1996); Vitronics, 90 F.3d at 1583, 39 USPQ2d at 1577 ("In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper."). 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. See Warner-Jenkinson, 117 S. Ct. at 1049, 41 USPQ2d at 1871 ("Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole."). 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.

CONCLUSION

The district court's finding on the likelihood of success is wrong because it was based on error concerning the functions performed by a claim limitation, and it thus misapprehended the possible range of equivalents available to the patentee. Tractech's E-Z Locker and the spring assembly claimed in the '015 patent are two separate branches of a tree that is rooted in the prior art pin-disk-spring assembly, and the question is whether those two branches are insubstantially separated. The claims as understood in light of the written description are directed toward structures that perform explicit functions. When considering those functions and the lack of one key function in the accused devices, we conclude that PowerTrax does not have a reasonable likelihood of establishing, on the present record, the insubstantiality of that difference. We therefore vacate the grant of the preliminary injunction and remand.

VACATED and REMANDED

United States Court of Appeals for the Federal Circuit

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VEHICULAR TECHNOLOGIES CORPORATION,

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TITAN WHEEL INTERNATIONAL, INC., DYNEER CORPORATION,

TRANSAMERICA AUTO PARTS COMPANY, INC. and

LEON ROSSER AUTO SERVICE, INC.,

Defendants-Appellants.

NEWMAN, Circuit Judge, dissenting.

This appeal is from the grant of a preliminary injunction. Although my colleagues on this panel, having vacated the injunction, remand the case to the district court, they also have pre-judged the issue on remand. By imposing a new rule of law that overrides the facts of equivalency, the panel majority bars liability for infringement by an equivalent device if the equivalent does not possess the unclaimed advantages or functions described in the specification. This new rule of law is contrary to the law of claim interpretation and it is contrary to the precedent of equivalency. It greatly narrows the scope of potential equivalents, and limits the findings available to be made by the trier of fact.

In seeking optimum judicial administration of a judgemade doctrine whose purpose is to prevent fraud upon the patent, this new rule weighs heavily against patentees whose inventions have been copied. Whether continuing judicial withdrawal of the availability of the doctrine of equivalents is in the national interest is a complex question of economic policy and property theory. In Warner-Jenkinson, however, the Court reaffirmed the viability of the doctrine. Now it is time for this court to lay to rest the tensions that have been resolved, and implement the law as it has been entrusted to us.

A. The "All-Advantages" Rule

The panel majority holds that the advantages mentioned in the specification, although not included in the claims, must be possessed by the accused device before there can be a finding of infringement by equivalency. This is neither a correct nor a useful rule of law. It directly contradicts the rule of claim construction that bars the importing of limitations into the claims from the specification. It renders the technologic facts of equivalency irrelevant, for it precludes a finding of equivalency whenever the accused device does not possess the unclaimed advantages described in the patent, whatever the actual significance of these unclaimed aspects.

It is entirely contrary to precedent to create this new rule of law that makes irrelevant the evidentiary bases of technologic equivalency. Precedent has established a carefully wrought balance between, on the one hand, providing an adequate incentive to innovation and fair protection to the inventor's property, and on the other hand allowing others to build upon the inventor's contribution. Precedent implements this balance through the facts found upon comparing function/way/result and the substantiality of the changes. It is incorrect to delimit these findings by imposing new barriers to consideration of the relevant evidence.

B. No "Separate Body of Case Law" Supports the Incorrect

"All-Advantages" Rule

The purpose of the doctrine of equivalents is to prevent a form of fraud, as the Supreme Court called it in Graver Tank. Its purpose is to protect inventors from those who would take the invention and by insubstantial change avoid the letter of the claims. Precedent contains a wealth of illustration of the balance of the tension between the notice function of claims and the goal of securing to inventors the earned benefits of their technological contributions. The cases that the panel majority states support its new theory, in fact simply illustrate various classical applications of the doctrine of equivalents. I do not share the majority's characterization of this precedent as supporting its new rule of law.

For example, Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473, 1477, 45 USPQ2d 1498, 1501 (Fed. Cir. 1998) is a straightforward application of prosecution history estoppel based on a certain Brennan reference, wherein the relevant feature of the accused device was found "indistinguishable from the comparable feature in Brennan." In the case at bar, there is no issue of prosecution history estoppel. In Tanabe Seiyaku Co. v. United States Int'l Trade Comm'n, 109 F.3d 726, 731-34, 41 USPQ2d 1976, 1981-83 (Fed. Cir.), cert. denied, 118 S. Ct. 624 (1997), based on extensive extrinsic evidence the Commission found that a person skilled in the art would not consider the claimed and the substituted solvents interchangeable. In contrast, in the case at bar both sides agreed that the accused Tractech device was completely interchangeable with the patented device. Ekchian v. Home Depot, Inc., 104 F.2d 1299, 1303-4, 41 USPQ2d 1364, 1368 (Fed. Cir. 1997), like Gentry, involved routine application of the doctrine of equivalents and prosecution history estoppel, not some "separate" legal approach. In Ekchian the Federal Circuit held that the district court had erroneously read aspects of the preferred embodiment into the claim as limitations. Id. (citing Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855, 865, 9 USPQ2d 1289, 1299 (Fed. Cir. 1988) ("References to a preferred embodiment, such as those often present in a specification, are not claim limitations.")). Indeed, Ekchian is strong support for the patentee's position herein that the unclaimed redundancy advantage is not an automatic limitation to equivalency. Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1106, 39 USPQ2d 1001, 1006 (Fed. Cir. 1996), also relied on by the panel majority, is irrelevant to this case. There is no issue raised herein of the accused infringer practicing subject matter that is disclosed but not claimed.

The majority also cites Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc., 98 F.3d 1563, 1574, 40 USPQ2d 1481, 1489 (Fed. Cir. 1996), cert. denied, 117 S. Ct. 1822 (1997). In Applied Materials the court interpreted claims wherein the phrase "cold purge process" was employed in the preamble of a Jepson claim, and held that such usage was a claim limitation when the preamble language "is essential to particularly point out the invention defined by the claims." Applied Materials says nothing about unclaimed advantages, and does not support the majority's proposition that any "explicit function" mentioned in the specification, that might be "identified with" a claim limitation, bars application of the doctrine of equivalents if that function is not literally performed by the accused device.

Finally, in Texas Instruments Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1168-69, 26 USPQ2d 1018, 1020-21 (Fed. Cir. 1993), as in Gentry and Ekchian, prosecution history estoppel prevented recovery of clearly surrendered claim scope. In the case at bar there is no issue of surrender or recovery of claim scope. The six cases cited by the panel majority as forming a "separate body of case law" involve either prosecution history estoppel or an issue of interchangeability or are merely irrelevant. They provide neither precedent nor support for the court's new, incorrect, "all-advantages" rule.

C. The Zentmyer Invention

All of the elements of the '015 patent claim were conceded to be literally present in the Tractech device except for the biasing means, which is set forth in clause [5] of Claim 1:

1. A differential mechanism comprising:

[1] output means;

[2] driving means in spaced relationship to said output means;

[3] driven means operably responsive to said driving means for powering said output means;

[4] said driving means having a pair of clutch driving members coaxially disposed with respect to each other and having opposing spaced-apart surface faces;

[5] biasing means interposed between said driving member 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;

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

[7] 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

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

(Spacing and numbering added.)

The biasing means as claimed comprises a pin aligned with a spring assembly consisting of two concentric springs bearing against the pin. The biasing means of the accused (Powertrax) device also comprises a pin and a spring assembly bearing against the pin. The accused spring assembly, however, instead of having concentric (outer and inner) springs, consists of an outer spring and an inner plug. It was conceded, at least at the preliminary injunction hearing, that the spring/plug assembly performed the same biasing function in the same way as the concentric spring assembly and achieved the same result. There was proffered deposition testimony of witnesses for both sides to the effect that the claimed and the accused spring assemblies were fully interchangeable.

Tractech's Director of Engineering testified that the inner plug served the same role as the inner spring. To the question, "What were the functions of the inner springs, as you viewed them?", he answered:

There's only two possible functions. Number one is to fill up a hole, that was my judgment is the reason that it was in. So that pin that was adjacent to the spring would bear against a nice, full flat surface, and the only other possible reason would be to give you more spring force, and I didn't feel that we needed additional spring force.

He did not mention what the majority now calls the "key back-up function." Both sides agreed that the "backup" function (the patent does not use this term) of the inner spring was of minor significance. The claims do not include this function. Nonetheless, my colleagues now hold, as a matter of law, that this unclaimed function must be literally present in the accused device, in order to find equivalency.

This new and absolute rule is presented by the majority as rendering irrelevant any evidence of insubstantiality of the differences, or sameness of function/way/result, with reference to the function described in claim clause [5]. This is a marked departure from precedent — a departure with no redeeming benefit if equivalency is to be fairly adjudicated. The importance of a property mentioned in the specification is a fact to be found and weighed. It is improper to foreclose such evidence by ruling that every unclaimed advantage must be present, whatever its relative significance in practice.

The Zentmyer patent describes six "objects" of his invention. The "primary object" is to "provide a means of assembly which simplifies both manufacture and installation of component parts in said differential mechanism." This object and advantage, it is agreed, is met by the accused device. The other objects are to increase strength and reliability of the joiner of the clutch parts, to permit ready installation without special tools, to provide an access opening in the clutch members and their housing, to impinge the spring assembly directly on the pins instead of on a connecting medium, and to provide an oblong passageway. All of these objects and advantages are realized in the accused device.

In describing the preferred embodiment Zentmyer discusses the advantage of the redundancy of the second spring, although that is not the primary purpose described for the spring assembly. The primary purpose is to interact with the pin and to eliminate the previously-used loose disk; this is fully achieved by the accused spring assembly. The equivalency of the change in the biasing means, whereby the concentric spring structure is replaced with an outer spring/inner plug, must be found on the evidence.

It is not a fair reading of the specification or prosecution history to hold that the patentee made a "specific exclusion" of all spring assemblies lacking the potential redundancy of this preferred embodiment. The patent, in the description of the preferred embodiment, states that should one spring break, "the second spring will bear the load and prevent the broken spring from exiting the assembly." As I have mentioned, this function was viewed by even the accused infringer as unnecessary. The Tractech Director of Engineering who produced both the initial exact copies of the PowerTrax differential and the later spring/plug modification (after the patent issued) stated that the spring/plug version was just as durable as the concentric spring version. This again contravenes the majority's insistence that spring backup was a "key" function whose absence negated any possibility of equivalency. This is a factual issue to be weighed, not a legal imperative.

The majority recognizes that this invention is directed to overcoming the problems with the prior art structure containing a separate disk, and the associated difficulties of installation, failure, and replacement. These are the problems that were overcome by Zentmyer in the device described in the '015 patent. It was not disputed, at the preliminary injunction hearing, that the accused Tractech device overcame the same problems, by using an almost identical structure. By requiring literal presence of the unclaimed backup potential in the substituted assembly the panel majority distorts and pre-judges its remand for findings on the question of equivalency. It is improper to create a new "imprisoning formula," see *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609 (1950), whereby absence of a single unclaimed advantage described in the specification is deemed fatal, as a matter of law, to a finding of infringement under the doctrine of equivalents.

It is the claims that define the invention. See 35 U.S.C. §112/2 ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1603 (Fed. Cir. 1987); *Bandag, Inc. v. Al Bolser's Tire Stores, Inc.*, 750 F.2d 903, 922, 223 USPQ 982, 996 (Fed.

Cir. 1984). Advantages described in the body of the specification, if not included in the claims, are not per se limitations to the claimed invention. See Applied Materials, 98 F.3d at 1574, 40 USPQ2d at 1489 (only when the inventor's purpose is included in the claims does the purpose serve as "a limitation of the claimed invention [that] should be met either literally or equivalently in order to satisfy the criteria of infringement"); E.I. DuPont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1432-34, 7 USPQ2d 1129, 1131-32 (Fed. Cir. 1988) ("Where a specification does not require a limitation, that limitation should not be read from the specification into the claims." (emphasis in original; citations omitted)).

Information in the specification may of course be relevant when finding the facts of equivalency; but the panel majority has posited its "all-advantages" rule as a threshold rule of law. Since it is incorrect to read into the claims any unclaimed advantages described in the specification, it is equally incorrect to hold that any potential equivalent must, as a matter of law, possess these unclaimed advantages. This is directly contrary to the guidance provided in Warner- Jenkinson:

An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.

117 S. Ct. at 1054, 41 USPQ2d at 1875.

The Supreme Court recognized that infringement by equivalency arises only when the accused subject matter is outside the literal reading of the patent claims. See also Wilson Sporting Goods Co. v. Geoffrey & Assoc., 904 F.2d 677, 684, 14 USPQ2d 1942, 1948 (Fed. Cir. 1990) ("doctrine of equivalents, by definition, involves going beyond any permissible interpretation of the claim language"). Thus the panel majority errs both in reading all of the advantages of the preferred embodiment into the claims, and in requiring that all advantages, whatever their substance, must be literally present in the accused device before the accused device can be deemed equivalent to what is claimed.

D. The Preliminary Injunction

The purpose of relief pendente lite is to adjust the relationship of the parties during the litigation. Our appellate role is to determine whether the district court abused its discretion in granting the preliminary injunction. H.H. Robertson Co. v. United Steel Deck, Inc., 820 F.2d 384, 387-91, 2 USPQ2d 1926, 1927-30 (Fed. Cir. 1987).

The grant of preliminary relief does not require, and the hearing before the district court did not purport to achieve, a full airing of the substantive merits. The panel majority does not discuss the several factors that the district court deemed significant in weighing the balance of harms, the adequacy of monetary damages, the likelihood of success on the merits, and the public interest. For example, at the hearing the patentee explained that inventor Zentmyer, after spending several years in creating, developing, testing, and perfecting his locking differential for the automobile after- market, filed a patent application and started a small business (PowerTrax) to make and sell the device. The superiority and commercial value of his device were immediately recognized, and it was immediately copied by Tractech, a large and established presence in this specialized market. As held in Illinois Tool Works, Inc. v. Grip-Pak, Inc., 906 F.2d 679, 683-84, 15 USPQ2d 1307, 1310 (Fed. Cir. 1990), it is appropriate to consider the size and relative position of the parties and the effect of a preliminary injunction on each. These aspects were argued before the district court.

In determining the likelihood of success on the merits, the district court may have considered that Tractech's engineers had tried, over a long period, and had failed to solve the problem that Zentmyer solved. The court may have considered that Tractech immediately and exactly copied Zentmyer's device, to its minute measurements. The court may have considered that Tractech's subsequent change was made upon a few moments of consultation with a patent attorney, while retaining all of Zentmyer's features and almost all of Zentmyer's structure. This was strong circumstantial evidence that Tractech's changes were insubstantial, and would be so shown at trial.

The district court found a sufficient likelihood that the patentee could prove that the accused spring assembly performed substantially the same function in substantially the same way with substantially the same result as the claimed spring assembly and, upon consideration of all the factors, granted the preliminary injunction. See H.H. Robertson, 820 F.2d at 387-91, 2 USPQ2d at 1927-30 (a preliminary injunction is as available in a patent case as in any other). On the proceedings before the district court, the preliminary ruling was supportable. See Sofamor Danek Group v. DePuy-Motech, Inc., 74 F.3d 1216, 1221, 37 USPQ2d 1529, 1532 (Fed. Cir. 1996) (at the preliminary injunction stage "neither party was required to prove [its] case in full").

The panel majority does not review whether there was an abuse of judicial discretion in the grant of the preliminary injunction, although that is the issue of this appeal. The authority cited by the panel majority consists of appeals of final judgments, not rulings pendente lite. E.g., Applied Materials, 98 F.3d 1563, 40 USPQ2d 1481 (Fed. Cir. 1996) (appeal of judgment after full bench trial). As stated in Thornburgh v. American College of Obstetricians and Gynecologists, 476 U.S. 747, 757 (1985), a court of appeals should limit its review of a preliminary injunction to "determining whether the trial court abused its discretion," unless the only issue is of law.

E. The Remand for Trial

Finding the facts of equivalency requires comparing the patented device with the accused device, element by element. The facts of equivalency are not found by "claim construction," but by evidence of the accused structure, including evidence of the substantiality of the differences from each element of the claim.

Appellate caution is required lest we deprive the complainant of the opportunity to prove its case at trial, by having prejudged it on unadmitted evidence and unfound facts. See Wright Med. Tech., Inc. v. Osteonics Corp., 122 F.3d 1440, 1445, 43 USPQ2d 1837, 1841 (Fed. Cir. 1997) ("district court must give Wright an opportunity to prove whether Osteonics infringed under the doctrine of equivalents"); Tanabe, 109 F.3d at 731, 41 USPQ2d at 1981 (patentee must prove by preponderance of evidence that every element is found in accused device literally or by an equivalent). The record before us is not a trial record, but a record of attorney argument. [1](#)

In essence, the panel majority has distorted on appeal the process of weighing the evidence, a process that should be left for trial. The correct procedure for determining equivalency as to claim clause [5], the biasing means, would be to consider the concentric springs set forth in the claim and the spring/plug of the accused device, and to determine equivalency on the entire record of similarities and differences in function, way, and result. Instead, the majority pre-selects a non-existent "inner spring limitation," although the claims do not mention an inner spring but describe the spring assembly as concentric springs. On remand, all of the facts must be available to the trier of fact, without pre-judgment and without exclusions based on the incorrect

"all-advantages" rule.

Possibly the panel majority fell into error by confusing claim construction with infringement, for the majority cites Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 39 USPQ2d 1773 (Fed. Cir. 1996) for its holding that the written description is "the single best guide to the meaning of a disputed term." Here there is no term meaning in dispute. The meaning and scope of the claimed spring assembly is clear, and unchallenged. Similarly, the panel majority relies on cases that turn on prosecution history estoppel. However, the rule propounded by the majority is not prosecution history estoppel, but the creation of a new bar to equivalency.

Thus I must, respectfully, dissent.

Footnotes

1 The majority provides us with pictures of the devices and the prior art, apparently inviting affirmation of the correctness of its findings. None of these pictures, or what they represent, is in evidence. The majority reports that they appear in the Joint Appendix. I need not belabor that compilation of the joint appendix is a matter of designation, not a concession that everything designated is admitted, correct, or probative. Thus the panel majority states that the pictures it places in this opinion are "depicted by consent of the parties in Exhibits C, A, and O." These pictures appear to be part of a Tractech attorney document that was included in the appendix by Tractech's attorney. Inclusion in the appendix is not "consent" to anything.

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