United States District Court,
N.D. California.

Roger W. RALEIGH, an individual,
Plaintiff.
v.
TANDY CORPORATION, a Delaware corporation,
Defendants.

No. C-95-2332-MHP

Jan. 10, 1997.

MEMORANDUM AND ORDER

PATEL**, District Judge.**

On March 8, 1993, Plaintiff Roger W. Raleigh brought this action against defendant Tandy Corporation ("Tandy"), alleging Tandy infringed Patent No. 4,159,126 ("Raleigh patent"). Tandy twice requested reexamination of the patent, Reexamination Control Nos. 90/003,038 ("first reexamination") and 90/003,644 ("second reexamination"), and the reexamination proceedings were consolidated. As a result of reexamination some claims were amended, some were canceled, and some were added. Now before the court are the parties' memoranda regarding claim construction. Having considered the parties' arguments and submissions, and for the reasons set forth below, the court enters the following memorandum and order.

BACKGROUND

On June 26, 1979, the United States Patent and Trademark Office ("Patent Office") issued plaintiff the Raleigh patent which claimed a model race car suspension system. The patent was allowed on the first Patent Office action without objection, so there is virtually no prosecution history associated with the original allowance. The claimed suspension system was intended to improve traction and stability on uneven surfaces by allowing the rear drive wheels to rise and fall relative to the chassis either together or individually. The Raleigh invention accomplished this result by mounting the rear wheels on a platform attached to the chassis such that the platform could rotate on axes either longitudinal or transverse to the chassis.

On March 8, 1993, Raleigh sued Tandy for infringement of the Raleigh patent. Tandy responded by seeking reexamination of the Raleigh patent by the Patent Office. Its first request was based on prior art represented by four patents: U.S. Patent Nos. 1,948,744 ("Curtiss patent"), 3,115,945 ("Dry patent"), and 3,752,246 ("Sullivan patent"), as well as Japanese Patent No. 43-25303 ("Hashimoto patent"). Before the first reexamination was complete, Tandy filed a second request based on French Brevet D'Invention No. 998,406 ("Boitel patent"), and the Patent Office combined the two reexamination proceedings. The reexamination proceedings ultimately resulted in cancellation of independent Claim 1 and dependent Claims 4 and 8 of the

Raleigh patent. The limitations of Claims 1, 4, and 8 were incorporated into those claims that had originally been dependent on them. Original Claims 2, 3, 5, 6, 7, 9, 10 and 11 were allowed with minor amendments, and new Claims 12, 13 and 14 were added. Raleigh alleges that Tandy's model race cars infringe all claims except for 2 and 3.

LEGAL STANDARD

A patent infringement determination involves two steps: the first step is to construe the claims, and the second step is to decide whether the accused device includes each limitation in the properly construed claims. *E.g.,* Fonar Corp. v. Johnson & Johnson, 821 F.2d 627, 631 (Fed.Cir.1987), *cert. denied,* 484 U.S. 1027 (1988).

Interpretation of patent claims is a question of law for the court. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384 (1996). The meaning of claims is ascertained from consideration of three sources: the claim language, the patent specification, and the prosecution history. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). In construing the meaning of claim language, the court should look first at the claims themselves, then use the specifications to aid in defining the terms used in the claims, and finally, turn to the prosecution history if necessary and if in evidence. Id. at 1582-83. The court may also examine the prior art cited in the prosecution history. Id. at 1583 (citation omitted). Ordinarily this intrinsic evidence should be sufficient to resolve any ambiguities and determine the meaning of the claims. *Id.* Only when it is not may the court use extrinsic evidence and then only to aid the court in "coming to the proper understanding of the claims" and the technology involved. *Id.* at 1584. Extrinsic evidence may not be used to vary or contradict the claim language. Markman, 52 F.3d at 981. Expert testimony is to be eschewed and used only as a last resort. Vitronics, 90 F.3d at 1584-85. The Federal Circuit in *Vitronics* showed a clear preference for other types of extrinsic evidence, when properly considered, such as dictionaries and prior art documents. *Id.* at 1585. FN1

FN1. In the instant action the court does not find it necessary to consider extrinsic evidence.

DISCUSSION

I. ***Analytical Framework for Interpretation of Means-Plus Function Claims***

The parties agree that the Raleigh patent contains "means-plus-function" claims authorized by 35 U.S.C. section 112, paragraph 6.

The Federal Circuit has not explicitly resolved how its *Markman* holding affects interpretation of means-plus-function claims. An accused device literally infringes a claim written in means-plus-function form when the device "perform[s] the identical function required by the limitation and ... incorporate[s] the structure disclosed in the specification, or its substantial structural equivalent, as the means for performing that function." Intellical, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1388-89 (Fed.Cir.1992); *see also* Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 805 F.2d 1558, 1562 (Fed.Cir.1986), *reh'g denied,* 846 F.2d 1369 (Fed.Cir.1988). The unique aspect of means-plus-function claims, therefore, is that infringement directly depends upon a finding that the accused device conforms to the specification or its equivalent, FN2 and not just to the claims as interpreted in light of the specification, prosecution history, and extrinsic evidence. In *Markman,* the Federal Circuit "express [ed] no opinion on the issue of whether a determination of equivalents ... is a question of law or fact." Markman, 52 F.3d at 977 n. 8.

FN2. Equivalency under section 112 differs in purpose and application from the doctrine of equivalents and their difference should be noted. Valmont Indus., Inc. v. Reinke Mfg. Co., Inc., 983 F.2d 1039, 1042-43 (Fed.Cir.1993). The doctrine of equivalents involves a three-part inquiry to determine if the accused device performs the same function, in substantially the same way, to achieve substantially the same result as the claimed invention. Id. at 1043. "In the context of section 112, however, an equivalent results from an insubstantial change which adds nothing of significance to the structure, material, or acts disclosed in the patent specification. A determination of section 112 equivalence does not involve the equitable tripartite test of the doctrine of equivalents." *Id*.

Hilton Davis Chem. Co. v. Warner-Jenkinson Co., Inc., 62 F.3d 1512, 1522 (Fed.Cir.1995) (en banc), *cert. granted,* 516 U.S. 1145, 116 S.Ct. 1014 (1996), decided by the Federal Circuit since *Markman* and now before the Supreme Court, held that the determination of infringement under the doctrine of equivalents is an issue of fact to be submitted to the trier of fact.

However, the doctrine of equivalents may be applied in the context of means-plus-function patents. *See* Valmont, 983 F.2d at 1044-45. In the case at hand, plaintiff's counsel represented at oral argument that plaintiff was proceeding under a literal infringement theory. However, he refused to rule out the possibility that defendant might market devices that may infringe under the doctrine of equivalents.
According to case law not overruled by *Markman,* courts must interpret the language of means-plus-function *claims* as a matter of law, but the determination of equivalents is a question for the jury. In *In re Hayes Microcomputer Prods., Inc. Patent Litigation,* the court delineated the respective roles of the court and jury in means-plus-function infringement litigation:

The determination of literal infringement is a question of fact, as is the determination of equivalent structure under 35 U.S.C. s. 112, paragraph 6.... Although claim interpretation is a question of law, the jury's ultimate finding on infringement is an issue of fact.

982 F.2d 1527, 1541 (Fed.Cir.1992) (citations omitted); *see also* In re Donaldson Co., Inc., 16 F.3d 1189, 1193-95 (Fed.Cir.1994) (interpreting 35 U.S.C. section 112, paragraph 6). Thus, as mandated by *Markman,* the court must construe the claims as a matter of law, looking to the specification, prosecution history, and extrinsic evidence for guidance. The court should also interpret the meaning of the specification language as a matter of law, but whether the accused device constitutes an equivalent to the structure disclosed in the specification is a question for the jury. FN3

FN3. In *In re Donaldson Co.,* the Federal Circuit noted:
The plain and unambiguous meaning of paragraph 6 is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.

16 F.3d at 1193. The court clarified, however, that
contrary to suggestions by the Commissioner, our holding does not conflict with the general claim construction principle that limitations found only in the specification of a patent or patent application should not be imported or read into a claim. The Commissioner confused impermissibly imputing limitations from

the specification into a claim with properly referring to the specification to determine the meaning of a particular word or phrase recited in a claim. *What we are dealing with in this case is the construction of a limitation already in a claim in the form of a means-plus-function clause and a statutory mandate on how that clause must be construed.*

Id. at 1195 (citations omitted) (emphasis added). The court effectively held that the specification language is statutorily incorporated into a means-plus-function claim. Under *Markman,* then, it is the court's responsibility to construe both the claim language and the specification language describing the structure as a matter of law. *See* Sofamor Danek Group, Inc. v. Depuy-Motech, Inc., 74 F.3d 1216, 1220 (Fed.Cir.1996) ("the court construes the means-plus-function language to encompass the structure, material, or acts described in the specification and equivalents thereof"). The jury's role is to compare the accused device to the court's interpretation of claims and specification language to determine whether the accused device contains every limitation of the claims and is substantially equivalent to the structure disclosed in the specification.
In sum, in a means-plus-function patent, the specification does not exhaust its usefulness in helping to interpret the claim language. A jury may find that although the accused device includes each limitation of the literal claim language, the device nonetheless does not infringe the patent because its structure is not equivalent to that disclosed in the specification.

The parties also raise the question of whether "prosecution history estoppel" applies to the determination of structural equivalents in a means-plus-function case. FN4 Prosecution history estoppel is typically applied only within the context of the "doctrine of equivalents." *See, e.g.,* Hughes Aircraft Co. v. United States, 717 F.2d 1351, 1361-62 (Fed.Cir.1983). Raleigh argues that because the doctrine of equivalents is a distinct and separate doctrine from the determination of structural equivalents in the means-plus-function context, prosecution history estoppel does not apply in the latter. Recently, the Federal Circuit held that a district court had given undue weight to a means-plus-function patent applicant's statements distinguishing prior art during prosecution and had construed the specification too narrowly considering its express language. Sofamor Danek Group, Inc. v. Depuy-Motech, Inc., 74 F.3d 1216, 1220-21 (Fed.Cir.1996). While the *Sofamor Danek Group* holding seems difficult to reconcilable with the application of prosecution history estoppel to the determination of equivalent structures in means-plus-function claims, the Federal Circuit has since held that "[j]ust as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction under s. 112, para. 6." Alpex Computer Corp. v. Nintendo Co. Ltd., 102 F.3d 1214, 1996 WL 640819, at (Fed.Cir. Nov. 6, 1996). Thus, while prosecution history will be used primarily to interpret ambiguous language of the claims and specifications, it may be given the full effect of prosecution history estoppel.

FN4.
The doctrine of prosecution history estoppel precludes a patent owner from obtaining a claim construction that would resurrect subject matter surrendered during prosecution of his patent application. The estoppel applies to claim amendments to overcome rejections based on prior art and to arguments submitted to obtain the patent.

Hughes Aircraft Co. v. United States, 717 F.2d 1351, 1362 (Fed.Cir.1983).
II. *Claim Interpretation*

A. ***Claim 5 as amended after reexamination***

The parties agree that Claim 5 includes its own limitations and incorporates the limitations of canceled Claims 1 and 4.

1. ***Canceled Claim 1***

The parties disagree as to the interpretation of canceled Claim 1.

a. ***Supporting Platform***

The first element of Claim 1 is a "supporting means for supporting a motor, rear axle, and rear wheels all for spring mounting to the chassis of the model racing car."

According to Tandy, the definition of "supporting means" is a "raised, flat surface mounted above the chassis." Tandy derives its interpretation from the specification of the Raleigh patent, describing a "supporting platform 19 which, in one embodiment, has a wedge-shaped longitudinal cross section so as to be thicker at the front end thereof than at the rear end" and which is exemplified by a tapered aluminum plate. But a patent is not limited to the preferred embodiments described in the specification. *E.g.,* Ziegler v. Phillips Petroleum Co., 483 F.2d 858, 869 (5th Cir.), *cert. denied,* 414 U.S. 1079 (1973).

Raleigh counters that the supporting means is neither flat nor mounted above the chassis, but instead is broadly interpreted as anything equivalent to the structure comprised of the supporting platform plus mounts for the motor, rear axle, and springs.

First, Raleigh accurately notes that the supporting means as described and drawn includes mounting blocks for both the rear axle and the engine, so it is not flat. The court therefore rejects Tandy's argument that the literal *claim* language should be limited to a supporting means employing a flat supporting platform. This element of canceled Claim 1 is interpreted to contemplate a supporting means consisting of a supporting platform that includes mounts for the motor, rear axle, rear wheels and springs.

On the other hand, Tandy properly interprets the *specification* language for purposes of this means-plus-function claim. Tandy's argument that the supporting platform must be flat and mounted above the chassis is bolstered by the plain meaning of "platform": "a horizontal flat surface usu[ally] higher than the adjoining area...." Webster's New Collegiate Dictionary 880 (1977).

Raleigh has not clearly contradicted the flatness aspect of the plain meaning of "platform" elsewhere in the specification. As the patent holder, Raleigh "is free to be his own lexicographer" by clearly defining words in the specification. Markman, 52 F.3d at 980. It is true that the specification language cited by Tandy does not preclude a supporting platform that is curved along the transverse axis. For example, a supporting platform having a tapered, essentially straight longitudinal cross-section but a curved, transverse cross-section would not be flat. However, an alternate embodiment is specified in which the supporting platform may depart from "precise parallelism" with the chassis to as much as 30 degrees. It is difficult to imagine how precise parallelism could be measured if both the supporting platform and chassis were not essentially flat. In addition, the supporting platform 19 is pictured flat in the figures depicting all embodiments of the invention. FN5 *See* Hazeltine Research v. General Motors Corp., 170 F.2d 6, 9 (6th Cir.), *reh'g denied,* 171 F.2d 686 (6th Cir.1948), *and cert. denied,* 336 U.S. 938 (1949) (drawings may be used to assist in interpreting the specification and claims). Therefore, the court interprets the specification to require a

supporting platform which is essentially flat, or its equivalent. The jury will decide whether any of Tandy's accused devices employ a supporting means equivalent to the essentially flat supporting platform described in the specifications of this means-plus-function patent.

FN5. As Raleigh notes, the first embodiment discusses a tapered supporting platform. However, the taper is not so pronounced as to contradict the court's interpretation of essential flatness.

b. ***Position of Supporting Means***

Raleigh also disputes Tandy's interpretation that the supporting means must be mounted above the chassis. The relevant language regarding this element of Claim 1 is "supporting means ... for spring mounting to the chassis," which provides no guidance regarding the relative positions of the two components. To resolve the ambiguity, the court looks to the prosecution history and specification.

Tandy argues that the prosecution history, particularly Raleigh's argument distinguishing the Reime prior art on the basis of wheel-to-road contact, FN6 compels the conclusion that the supporting platform must be mounted above the chassis.FN7 Tandy argues that the only reason Raleigh's wheels are not constantly in contact with the road is that the platform supporting the wheels is above the chassis, allowing the wheels to break contact with the road.

FN6. Raleigh argued before the Patent Office that the Reime prior art was not applicable because:
Reime does not spring mount his rear wheel support to the body frame-his rear wheel support is in contact with the road. In Raleigh, the mounting platform 19 is not weighted so that it is constantly in contact with the road. The platform may rise and fall and twist relative to the chassis 11 as road conditions require. Thus the reference and patent under reexamination support the rear wheels in an entirely different manner and for entirely different purposed. Traction is maintained differently. Suspension is different.

FN7. Tandy's argument that the chassis must be suspended from the supporting platform is merely a restatement of its argument that the chassis must be below the platform.

The court need not determine whether Raleigh's attempt to distinguish Reime before the Patent Office compels the conclusion urged by Tandy because the Patent Office's rejection of Raleigh's argument renders it irrelevant to the interpretation of his claim. *See* Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1219 (Fed.Cir.1995). Here, because Raleigh's argument was not accepted by the Examiner, it should not limit the specification. The prosecution history, therefore, does not compel the conclusion that the supporting means must be spring-mounted above the chassis.FN8

FN8. Raleigh argues that the supporting platform is "mounted below the chassis for practical purposes" because the cap screws 35 which partially constrain the supporting means terminate in the chassis and exert a downward force on the supporting means when combined with the coil springs 34. In other words, the cap screws should be considered an integral part of the chassis, to which they are rigidly attached, and because their caps are above the platform, the platform is effectively mounted below the chassis. This argument is not helpful. The question, as the court understands it, is whether the claims limit the invention to a structure

in which the plane of the supporting platform is at all times above the chassis, not whether the force is exerted from above or below.

Moreover, the cap screws and the chassis, while connected, are not the same thing. The Federal Circuit, in addressing the argument by a patentee that the claim terms "second portion" and "return portion" were interchangeable, concluded that because they were each provided for in the specification "they logically cannot be one and the same." Engel Indus., Inc. v. Lockformer Co., 96 F.3d 1398, 1404-05 (Fed.Cir.1996). On the contrary, the prosecution history could be read to support Raleigh's interpretation. On reexamination, the examiner rejected Claim 1 as obvious "over Dry et al. in view of Hashimoto." Isbester Dec., Ex. J at 1. The Hashimoto patent specified a structure in which the supporting means for the rear axle was below the chassis frame.FN9 However, because the examiner did not find Raleigh's patent obvious in light of Hashimoto alone, the court cannot assume the examiner interpreted the Raleigh patent to encompass both above-mounted and below-mounted supporting platforms. Therefore, the language of canceled Claim 1 alone cannot be interpreted to require a supporting means mounted above the chassis.

FN9. Similarly, in the second reexamination, the examiner cited the Boitel patent which disclosed a structure in which the supporting means was below the chassis. However, the record does not clarify the extent to which the examiner relied on Boitel in rejecting any of Raleigh's claims.

The specification, however, when read as a whole, requires an above-mounted supporting platform. Raleigh is correct that no language in the specification expressly states that the supporting platform must be mounted above the chassis. However, the drawings consistently depict the supporting platform above the chassis. Reading the specification language in light of the drawings of the three embodiments, a below-mounted supporting platform does not appear functionally possible.FN10 In conjunction with this element of canceled Claim 1, the court interprets the specification to require the supporting means to be mounted above the chassis.

FN10. For instance, the specification calls for spring-mounting the platform 19 to the chassis 11 "via a pair of laterally spaced coil springs 34 coaxially mounted on cap screws 35 (see FIG. 2) passing through aligned bores 36 (see FIG. 4) in the mounting platform 19 and terminating in taped [sic] bores 37 (see FIG. 5) in the chassis 11." If the supporting platform were mounted below the chassis, the two cap screws would protrude downward through the platform toward the ground, where they would interfere with ground clearance. In other words, a below-mounted platform structure that remained consistent with the specification language would not function properly.

Next, Tandy argues that Claim 12 cannot support Raleigh's interpretation of canceled Claim 1 to include a supporting platform mounted below the chassis. Claim 12 includes the language "said springs having opposite ends bearing against said chassis and said support." Tandy argues that this claim is inconsistent with the specification and improperly enlarges the scope of the patent as originally issued. *See* 35 U.S.C. s. 305 (prohibiting claims added or amended during reexamination from enlarging the scope of the patent). The court finds that, because Claim 1 is interpreted in light of the specification to require an above-mounted supporting platform, Claim 12 similarly encompasses only an above-mounted supporting platform.

c. *Spring Mounting*

Canceled Claim 1 continues:

first and second spring mounting means for spring mounting of said supporting means to such chassis in a shock absorbing manner at first and second mounting points located respectively on opposite lateral sides of the longitudinal centerline of said chassis to permit said supporting means, motor, axle and rear wheels to move independently of said chassis.

Tandy would interpret this element of the claim according to the structure disclosed in the specification, limiting it to a configuration in which each coil spring is constrained at the top by the cap of a cap screw and at the bottom by the supporting platform of the supporting means. Tandy points to no language in the claim to support this interpretation and fails to pursue it in its brief. As discussed, the specification may help define the terms of the claims, but the claim language is not to be contradicted by the drawings or the description of the preferred embodiments. The mere presence of cap screws in the specification does not compel the conclusion that the claims are limited to the use of cap screws. The court interprets this element of canceled Claim 1 to require shock absorbing springs for mounting the supporting means to the chassis at two points on opposite sides of the chassis' centerline to permit the supporting means with attached motor, rear axle and rear wheels to move independently of the chassis.

However, the specification consistently describes a structure employing cap screws. *See* Complaint, Ex. 1 at col. 3:8-13, 59-68, col. 4:33-39. The court therefore interprets the specification language to require a structure employing coil springs constrained by cap screws or their structural equivalents.

Tandy would also have the court rule that the following are *not* equivalents as a matter of law: structures not employing cap screws to constrain the springs, structures in which the chassis is mounted above the support means, or structures in which the springs are set on shock absorbers. Whether particular structures are equivalent to the structures disclosed in the specification is a question for the jury. In re Hayes, 982 F.2d at 1541. The court declines Tandy's invitation to usurp the role of the jury.

d. *Third Mounting Means*

Canceled Claim 1 also provides for a "third mounting means for mounting said supporting means to the chassis at a point longitudinally spaced of said first and second mounting points."

Raleigh argues that the prosecution history supports the broad interpretation that the third mounting means may be longitudinally spaced either toward the front or rear of the chassis from the two spring mounting means. The Patent Office Examiner cited both the Boitel patent and the Hashimoto patent in deciding that Claim 1 was anticipated by prior art. Both the Boitel and Hashimoto patents show the pivot point at the front of the structure supporting the rear axle and engine, rather than the rear, as in the Raleigh specification. Raleigh contends that the Examiner's ruling that this prior art anticipated Claim 1 means that Claim 1 contemplates either front or rear third mounting means.FN11 This interpretation is consistent with the language of the claim.

FN11. Indeed, Tandy argued during reexamination that the placement of the pivot point at the rear end of the chassis did not appear as a limitation in the Raleigh patent, so Claim 1 was anticipated by Hashimoto.

One remaining ambiguity is the meaning of "longitudinally spaced." Read in light of the prior paragraph of

canceled Claim 1, longitudinally spaced means, at a minimum, located at a different point along the chassis' longitudinal centerline than the point where a line connecting the centers of the springs would intersect the centerline. This configuration is required to allow the supporting platform to rotate about a transverse axis. However, the phrase remains ambiguous as to the magnitude of the longitudinal spacing. Tandy argues that Raleigh's efforts to distinguish the Hashimoto patent during a later Office Action preclude a "short coupling," or short longitudinal spacing between the third mounting means and the pair of spring mounts. Specifically, Raleigh argued:

To overcome high frequency vibrations, a short coupled mounting may be appropriate. However, to overcome high amplitude, low frequency vibration, Claim 1 of Raleigh calls for "third mounting means for mounting [the] supporting means be at point longitudinally spaced of [the pair of spring mounting means]." Hashimoto teaches the contrary of Raleigh's invention."

Response to Office Action, February 16, 1994, at 4. The court finds "longitudinally spaced" to be ambiguous as to the magnitude of spacing and therefore consults the prosecution history to interpret the phrase to require a minimum spacing. The minimum spacing should be set such that one skilled in the art would not characterize it as a "short-coupled" mounting.

A related question is whether the rear axle must be located longitudinally between the third mounting means and the pair of spring mounting means. Tandy points to no language that literally requires such a structure, nor does it identify any ambiguous language which could be interpreted as such in light of the specification, the prosecution history or extrinsic evidence. Therefore, the court declines to impose such a limitation as a matter of law. Regardless of where the rear axle mount is placed relative to the third mounting means and pair of spring mounting means in an accused device, the jury should decide whether the structure is equivalent to the structure disclosed in the Raleigh specification.

As a whole, this portion of canceled Claim 1 is interpreted to mean a third mounting means for the supporting means, located far enough along the chassis' longitudinal axis from the intersection of that axis with a line drawn between the centers of the two springs not to be considered "short-coupled."

The third mounting means has three embodiments in the specification. Because the parties do not dispute the specification language, the jury should rely on the language of the specification to determine whether an accused device employs an equivalent structure. The first embodiment employs a rigid, "pivot block" connection which relies on deformation of the supporting platform to allow the rear axle to rotate about axes longitudinal and transverse to the chassis. Complaint, Ex. 1 at col. 3:3-8. The second embodiment employs a ball joint connection which allows a rigid supporting platform to rotate in the same manner. *Id*. at col. 3:49-52. The third embodiment replaces the pivot block or ball joint with a universal joint to accomplish the same rotation. *Id*. at col. 4:11-18. Tandy again seeks determinations from the court that certain configurations are not equivalents as a matter of law. The court leaves those questions for the jury.

Finally, canceled Claim 1 concludes by claiming a "twistable means operatively associated with said supporting means for permitting twisting of said supporting means about an axis of revolution extending longitudinally of said elongated chassis." *Id*. at col. 5:1-4. The parties do not dispute that this claim language refers to the three embodiments of the "third supporting means" described above: the pivot block, the ball joint and the universal joint. As discussed, the twistable means may be positioned toward the front or back of the chassis relative to the rear axle. If the jury finds that an accused device uses a structure equivalent to any of these, the device falls within the limitations of this portion of canceled Claim 1.

2. ***Canceled Claim 4***

The parties agree as to the interpretation of canceled Claim 4: "The apparatus of claim 1 wherein said first and second spring mounting means each has an axis of maximum compliance extending generally vertically." The court accepts the parties' interpretation that "Claim 5 is construed to mean that the springs are mounted for vertical compression and extension."

3. ***Original Claim 5***

Claim 5 incorporates Claim 4 (which incorporated Claim 1): "The apparatus of claim 4 including means for restraining lateral movement of said supporting means relative to said chassis." The parties dispute the meaning of "means for restraining lateral movement."

Tandy argues that the prosecution history limits the specified structure for restraining lateral movement to the use of cap screws or their equivalents. In particular, Tandy points to Raleigh's attempts to distinguish the Reime prior art in his Request for Reconsideration of final rejection. Raleigh argued that the "vertically disposed shock absorbers [in Reime] do not restrain lateral movement." The Examiner agreed that the lateral restraint provided by Raleigh's "guideposts and bores" arrangement distinguished it from both the Reime and Boitel prior art. The examiner concluded that "the specification of the [Raleigh] application contains portions relating to the means plus function phrase in claims 5, 9, 13 ... directed to means for restraining lateral movement, which excludes the Reime references and the Boitel reference from being equivalent." Clearly, Raleigh argued and the Examiner relied upon the generalized "means for restraining lateral movement," and not the particularized use of cap screws to exclude the prior art. Even under the broad doctrine of prosecution history estoppel, which does not apply here, Raleigh's Claim 5 language is not limited to use of cap screws or equivalents.

As to the specification language, Raleigh's interpretation is accurate. Raleigh discloses two alternative structures for constraining lateral movement. In the two embodiments employing either the pivot block or the ball joint as the third mounting means,

[r]elative lateral translation between the mounting platform 19 and the chassis 11 is restrained by means of the cap screws 35 (see FIGS. 2 and 4). The cap screws serve as guideposts cooperating with the inner lip of bores 36 in the mounting plate 19. Such bores 36 being dimensioned relative to the transverse dimensions of the cap screws so as to permit twisting of the platform 19 about the Z axis of revolution [longitudinal axis] while at the same time restraining excessive lateral translation of the mounting platform 19 relative to the chassis 11.

Complaint, Ex. 1 at col. 3:59-68. However, in the embodiment employing the universal joint as the third mounting means, lateral movement is constrained "[b]y controlling the tolerance between the width of the inside of the yoke 56 and the outer side edges of the mounting platform 19 at the universal joint 54...." *Id*. at col. 4:22-25. The "means for restraining lateral movement" must be implemented in a structure equivalent either to the cap screws passing through clearance holes in the supporting platform or to the controlled tolerances between universal joint yoke and the supporting platform.

B. ***Claim 6***

This claim is dependent upon Claim 5: "The apparatus of claim 1 [replaced by claim 5 after reexamination]

wherein said third mounting means includes a ball joint for coupling said supporting means to said chassis and which functions as said twistable means." Tandy revives its argument from Claim 5, seeking an interpretation that the ball joint or its equivalent must attach the rear of the supporting means to the rear of the chassis, thereby suspending the chassis below the supporting platform. This interpretation has been rejected as to the rear-attachment configuration but adopted as to the above-mounted platform.

Claim 6 is interpreted to mean the ball joint 51 or its equivalent for connecting the supporting platform to the chassis in such a way as to permit twisting of the support relative to the chassis. Of course, Claim 6 also incorporates the limitations of Claim 5.

C. *Claim 7*

Like Claim 6, Claim 7 is dependent upon Claim 5: "The apparatus of claim 1 [replaced by claim 5 after reexamination] wherein said third mounting means includes joint for coupling said supporting means to said chassis and which also functions as said twistable means."

Tandy's only new argument is that "the third mounting means attaches ... the supporting means to the ... chassis at a single point and allows the right and left edges of the [supporting means] to rotate about the longitudinal axis of the model car chassis which extends through the center of the third mounting point." This interpretation is flatly contradicted by the first preferred embodiment of the third mounting means which attaches the chassis and supporting means via a "pivot block" and a "plurality of screws." Clearly this is not a single-point attachment. Furthermore, given the unpredictable torsion of the supporting means in the first embodiment the rotation need not be around an axis centered on the pivot block.

This claim is interpreted in light of the specification to employ one of the three disclosed "third mounting means" or their equivalents. The three embodiments of the third mounting means are interpreted above in Claim 5. Because the ball-joint and universal-joint structures depend on the third mounting means itself for the twistable means, they need not be further interpreted. The pivot block structure, however, relies on deformation of the supporting platform, which has a tapered longitudinal cross-section to allow more deformation near the pivot block:

torsional flexure of both the flexible resilient mounting platform 19 and the necked down region of the flexible resilient chassis at 42 contribute to the torsional deflection, i.e., twisting rotation of the rear suspension system about the Z [longitudinal] axis of rotation.

Complaint, Ex. 1 at col. 3:30-35. This language leaves open one question: Does "twisting" refer only to rotation on the longitudinal axis, as specified in the pivot-block structure, or does it refer to rotation on both the longitudinal and transverse axes, as specified in the ball joint and universal joint structures? Additional language from the specification clarifies that in each of the three embodiments, the structure is intended to permit "twisting" about both axes. *See Id.* at col. 3:19-22, col. 3:52-58, col. 4:18-20.

Thus, Claim 7 is construed to mean any of three disclosed "third mounting means" structures which both couple the supporting means to the chassis and allow for twisting, or rotation, about axes longitudinal and transverse to the chassis. The three structures of the third mounting means are the pivot block as coupled with the tapered supporting platform and necked chassis, the ball joint assembly, and the universal joint assembly, or their equivalents.

D. ***Claim 9***

The parties agree that Claim 9 incorporates the limitations of canceled Claim 1, discussed above, and canceled Claim 8. "The apparatus of claim 8 including means for providing restraint against relative lateral movement between said supporting means and the chassis." This claim is quite similar to Claim 5, except that Claim 5 incorporates the limitations of canceled Claims 4 and 1, whereas Claim 9 incorporates the limitations of canceled Claims 8 and 1.

The parties dispute the interpretation of "means for providing restraint against relative lateral movement." This phrase is virtually identical to the phrase "means for restraining lateral movement" in Claim 5. The parties raise no new arguments, so the lateral movement phrase in Claim 9 is construed identically to that of Claim 5.

Canceled Claim 8 reads:

The apparatus of claim 1 wherein said third mounting means and said twistable means includes a coupling means for coupling said supporting means to said chassis and providing relative rotational movement between said chassis means and said supporting means about a pair of axes of revolution, one of said axes of revolution being generally transverse to the longitudinal axis of the chassis and the other axis of revolution extending generally in the direction of the longitudinal axis of the chassis.

The language of Claim 8 differs from that of Claim 7 in that Claim 8 does not clearly require that the coupling between the supporting means and chassis be an integral part of the third mounting means.FN12

FN12. The disagreement of the plural subject, "said third mounting means and said twistable means," with the singular verb, "includes," makes it unclear whether the verb modifies one or both subjects.

In light of the specification language, however, the interpretation of canceled Claim 8 does not significantly differ from the court's interpretation of Claim 7. Tandy argues once again, this time based on Claim 8, that the third mounting means must suspend the chassis from the supporting means and must attach the two at their rear portions. As discussed above, the supporting means must be mounted above the chassis, but the third mounting means need not attach at the rear.

E. ***Claim 10***

Claim 10 reads: "The apparatus of claim 8 [replaced by claim 9 after reexamination] wherein said first and second spring mounting means includes a pair of coil springs mounted with their axes of maximum compliance extending generally vertically."

The parties do not dispute the interpretation of Claim 10:

Claim 10 is dependent upon claim 9 and further states that the first and second spring mounting means includes a pair of coil springs mounted with their axes of maximum compliance extending generally vertically. In this respect, the claim is similar to that of Claim 4 and includes similar subject matter as well as equivalents thereof. Claim 10 is interpreted to mean that the springs are mounted for vertical compression and extension.

Plaintiff's Memorandum at 20.

F. ***Claim 11***

Claim 11 reads:

The apparatus of claim 1 [replaced by claim 5 after reexamination] wherein said third mounting means is coupled to said chassis means at a point laterally closer to the longitudinal centerline of the chassis than the average lateral spacing of said first and second spring mounting means from said longitudinal centerline.

The parties do not dispute the interpretation of Claim 11:

The ball and socket joint of FIG. 6 is on the centerline of the chassis and the universal joint 54 of FIGS. 7 [and 8] is centered on the longitudinal centerline of the chassis. On the other hand, the springs 34 are spaced to either side of the centerline. Claim 11 is interpreted to mean that the springs are connected to the chassis farther apart than the ball and socket joint 51 and the universal joint 54 or the equivalent means for mounting an end or the support for the motor, axle and wheels to the chassis.

Plaintiff's Memorandum at 20.

G. ***Claim 12***

Claim 12 reads:

(As amended) In a model racing car wheel suspension system for suspending the motor and wheels from an elongated chassis:

a single support for supporting a motor, a rear axle and a pair of rear wheels mounted to said axle all for spring mounting to the chassis of said model racing car;

first and second coil springs for spring mounting of said support to said chassis in a shock absorbing manner at first and second mounting points located respectively on opposite lateral sides of a longitudinal centerline of said chassis and adjacent said rear axle to permit said support, motor, axle and wheels to move independently of said chassis;

said spring having opposite ends bearing against said chassis and said support, respectively;

mounting means for mounting said support to said chassis at a point longitudinally spaced relative to said first and second coil springs and adjacent said rear axle; and

twistable means operatively associated with said support for permitting twisting of said support about an axis of revolution extending longitudinally of said elongated chassis;

said first and second coil springs each having an axis of maximum extending generally vertically and which further comprises means associated with said springs for restraining lateral movement of said support relative to said chassis.

Plaintiff's Memorandum, App. 2 at 2.

Tandy argues that the addition of Claim 12 in the reexamination proceedings impermissibly enlarged the scope of the original patent. *See* 35 U.S.C. s. 35. However, the Patent Office rejected this argument by allowing Claim 12 when Tandy advanced it during reexamination. Plaintiff's Memorandum, App. 3 at 12-15. Therefore, despite its not being written in "means-plus-function" language, the court interprets Claim 12 not to broaden the scope of the original patent.

In particular, the "single support" of Claim 12, paragraph 2, is construed not to broaden the "supporting means" of Claims 5 and 9. Indeed, the plain meaning of a "single" support appears narrower than that of a supporting means, even when the latter is limited to the specified structure or its equivalent. As Raleigh argues, a jury might find a multi-part supporting means to be equivalent to Claim 5, whereas such a configuration would contradict the plain meaning of Claim 12. As noted above in the interpretation of Claim 5, the supporting means (and therefore the single support) must be mounted above the chassis, and the supporting platform must be essentially flat. To avoid enlarging the scope of the patent, the "single support" is interpreted in light of the specification to incorporate these same limitations.

Tandy also objects to paragraph 4 of Claim 12. Under this paragraph, the springs used in the spring mounts must have one end bearing against the chassis and the other end bearing against the support for the motor, rear axle and rear wheels. Considering the court's interpretation of Claim 5 to require an above-mounted supporting platform, a claim which allowed *any* configuration in which the spring contacted both the chassis and the support would impermissibly broaden the patent grant. The question therefore becomes whether other limitations in Claim 12 adequately narrow the claim to fall within the original patent grant. The court finds that the language of Claim 12, particularly of paragraphs 3 and 4, is ambiguous as to whether the support is mounted above or below the chassis. Looking to the specification, the court construes paragraphs 3 and 4 of Claim 12 to fall within the original patent grant by conforming to the means-plus-function Claim 5 and related specification language. Thus the support must be mounted above the chassis.

The remainder of Claim 12 should be interpreted as coterminous with Claim 5.

H. ***Claim 13***

Claim 13 reads: "The apparatus of Claim 12 in which said mounting means comprises a ball and socket for coupling said support to said chassis and which also functions as a twistable means." Tandy supports an interpretation similar to that of Claim 6. The parties' arguments have been considered in the Claim 6 discussion. Claim 13 is therefore interpreted consistently with the construction given Claim 6 and the relevant specification language.

I. ***Claim 14***

Claim 14 reads:

The apparatus of Claim 12 in which said twistable means comprises a yoke extending transversely of said chassis, a first pivot pivotally mounting said yoke to said chassis and a second pivot pivotally mounting said yoke to said support, whereby said support may pivot about a pair of horizontal axes of revolution, one said axis of revolution being generally transverse to the longitudinal axis of said chassis and the other said axis of revolution extending generally in the direction of longitudinal axis of said chassis.

Claim 14 is equivalent to Claim 7 interpreted in light of the specified structure and its equivalents. Raleigh's

arguments were disposed of in the discussion of Claim 7. Claim 14 is therefore interpreted consistently with Claim 7 and the relevant structures and their equivalents in the specification.

III. ***Summary: Disposition of Key Disputes***

As Tandy points out, the parties disagree over four main points.

First, Tandy would narrowly interpret the "supporting means" to require it to be mounted above the chassis and to employ an essentially flat supporting platform. The court interprets the patent to require a supporting means mounted above the chassis and agrees with Tandy that the supporting platform must be essentially flat.

Second, Tandy rephrases the same argument to require the "suspension system" to suspend the chassis below the supporting means. As noted, the court finds the Raleigh patent contemplates a supporting platform mounted above the chassis.

Third, Tandy would narrowly interpret the "means for restraining lateral movement" to require a structure employing cap screws passing through clearance holes in the supporting means or an equivalent structure. The court finds that the structure cited by Tandy represents only one embodiment of the patent. A jury could also find an accused device to have infringed the patent if it employs a structure equivalent to the universal joint to restrain lateral movement.

Fourth, Tandy would require the "third mounting means" to attach the supporting means to the chassis at the rear portion of each component. The court interprets the claims and specifications to allow the third mounting means to attach the two components at their front or rear portions, so long as it exceeds a minimum longitudinal offset from the spring mounting means. Likewise, nothing in the claims or specification requires as a matter of law that the rear axle be longitudinally placed between the third mounting means and the pair of spring mounting means.

CONCLUSION

As set forth above, the disputed terms in the aforementioned claims are hereby construed as a matter of law.

IT IS SO ORDERED.

N.D.Cal.,1997.
Raleigh v. Tandy Corp.