

UNITED STATES DISTRICT COURT
DISTRICT OF PUERTO RICO

AUREO RIVERA-DAVILA and)
AUREO E. RIVERA,)
Plaintiffs,)

v.)

CIVIL ACTION NO. 90-2118

ASSET CONSERVATION, INC.,)
GABRIEL GUIJARRO-BRUNET,)
IRS MIERES-DE-GUIJARRO and)
CONJUGAL PARTNERSHIP)
GUIJARRO-MIERES,)
Defendants.)

MEMORANDUM AND ORDER

December 10, 2002

Saris, U.S.D.J.¹

INTRODUCTION

This patent dispute involves car security systems that prevent theft by disabling the car's ignition. A jury found that defendants Asset Conservation, Inc., Gabriel Guijarro-Brunet, and Iris Mieres de Guijarro willfully infringed claim 11 of U.S. Patent No. 3,548,373 (the "'373 patent") and awarded \$310,000 in damages.² The district court increased the amount to \$1,240,000.

¹ Sitting by designation.

² Gabriel Guijarro-Brunet and Iris Mieres de Guijarro are the husband-and-wife officers of Asset Conservation, Inc.

Because the district court did not construe the claim language before submitting the infringement issue to the jury, the Federal Circuit vacated the finding of infringement, although it affirmed the ruling on the validity of the patent, as well as various evidentiary rulings. Rivera-Davila v. Asset Conservation, Inc., 230 F.3d 1378 (Fed. Cir. 2000). Upon remand, the parties filed Markman briefs and cross-motions for summary judgment. See Markman v. Westview Instruments, Inc., 517 U.S. 370, 384-391 (1996) (construction of the literal scope of a patent's claim(s) is a matter of law).

On June 12, 2002, the district court summarily denied the cross-motions. Soon thereafter, the case was transferred to this Court (sitting by designation). After the transfer, the Markman briefs and cross-motions for summary judgment were revived. On August 21, 2002, the Court held a non-evidentiary hearing on claim construction and the cross-motions, and permitted post-hearing submissions of trial testimony.

After hearing, the Court ALLOWS defendants' motion for summary judgment of non-infringement of claim 11 of the '373 patent, and DENIES plaintiffs' motion for summary judgment of infringement.

FACTS

I. Overview of the Automotive Ignition System

The purpose of the automotive ignition system is to provide current to the spark plug that will ignite the gasoline-air mixture within the combustion chamber. When the mixture of air and gasoline is set on fire, the gases expand inside the cylinders of the engine and push the pistons, which then power the car.

Creation of current at the spark plug requires transfer of electrical energy from the car battery to the spark plug. Current flows from the car battery through the ignition switch to the ignition coil. The ignition coil is a transformer consisting of windings of two coils. (Trial Transcript ("Tr.") at A300.) The ignition coil sends high voltage to the distributor, which then distributes impulses of voltage to the spark plug. (Id. at A127.) If the voltage is not sufficient to fire the spark plug, the automobile will not start.

II. '373 Patent

A. Prosecution History

On July 28, 1967, Aureo Rivera Davila and his son Aureo E. Rivera (together, "the Riveras") filed U.S. Patent Application No. 656,802 with the United States Patent and Trademark Office

("PTO"). The application - entitled "Theft Preventing System for Vehicles" - contained fifteen claims. Claim 1 was an independent claim for an automobile security system with several elements, including a "disabling switch means in said ignition circuit for opening the same in response to displacement of the lock means to the lock position." In an office action dated November 10, 1969, the PTO examiner rejected all fifteen claims as unpatentable over certain prior art.

On February 16, 1970, the Riveras filed an amendment to their application. The amendment made several changes to the claims, including rewriting claim 1 to specify that the disabling switch means was "connected in series" with the ignition switch. In their remarks accompanying the amendment, the Riveras stated:

Claim 1 particularly as amended therefore clearly defines in a patentable sense over the prior art references cited of record by specifying, "disabling switch means connected in series with the ignition switch for opening said ignition circuit in response to displacement of the lock means to the lock position." None of the patents cited of record discloses a disabling switch in the ignition circuit which is opened when a hood lock is displaced to a lock position.

The PTO examiner allowed the claims as amended, and the '373 patent issued to the Riveras on December 15, 1970.

On April 10, 1985, Chapman Industries Corporation, which had

been sued by the Riveras for infringement of the '373 patent, filed a reexamination request with the PTO.³ Chapman contended that the '373 claims were invalid in light of prior art not previously considered by the PTO. The PTO found that Chapman had raised a substantial new question of patentability, and conducted reexamination proceedings. As a result of the reexamination, claim 1 was canceled, and claims 2-12, 14, and 15 were amended. Prior to claim 1's cancellation, claim 11 was dependent on claim 1; when claim 1 was canceled, the text of claim 1 was incorporated into claim 11. Claim 11 of the reexamined patent reads:

A theft preventing system for a vehicle..., including lock means movably mounted within said vehicle for displacement between a release position and a lock position operatively engaging the hood to prevent opening of the engine compartment, and disabling switch means connected in series with the ignition switch for opening said ignition circuit in response to displacement of the lock means to lock position, including an alarm circuit, means responsive to displacement of the lock means to the release position for disabling the alarm circuit during operation of the engine, and vibration sensing means connected to the alarm circuit

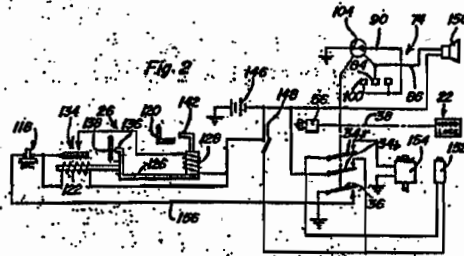
³ Asset Conservation, which sold Chapman's car security systems in Puerto Rico, was also a defendant to the original infringement suit. That suit was dismissed without prejudice after the reexamination proceedings began.

for operation thereof in response to movement of the vehicle while the lock means is in the lock position.

U.S. Patent Reexamination Certificate B1, 3,548,373, col. 5, ll. 17-35 (emphasis added). Claim 11, as rewritten, is the only claim at issue in this case.

B. Preferred Embodiment

The written description of the '373 patent discloses a single preferred embodiment for a car security system. Figure 2 depicts the system's electrical circuitry:



In the depicted circuitry, "an electrical connection is established from the power output terminal of the [car] battery

through the closed switch section 34b to the ignition coil 152 which in turn is electrically connected through the closed disabling switch section 34a to the grounded distributor 154."

Col. 5, ll. 13-18 (emphasis added). When the system is activated, it "opens the disabling switch section 34a so that the ignition circuit cannot be closed by some unauthorized by-pass of the ignition switch 148." Col. 5, ll. 31-33. In short, the activated system breaks the flow of current to the distributor, thereby disabling the ignition.

III. Defendants' Car Security Systems

Plaintiffs have accused defendants of infringing claim 11 of the '373 patent by selling several Chapman car security systems in Puerto Rico, in the years 1984-1987. The plaintiffs have focused on systems that used an "ignition suppressor." (E.g., Tr. at A147.) The ignition suppressor was located on a branch off of the ignition circuit. Activation of defendants' security systems closed a switch on the ignition suppressor branch. (Tr. at A312; Br. in Supp. of Defs.' Markman Mot. and in Supp. of Defs.' Mot. for Summ. J. of Non-Infringement (Docket No. 330) at Ex. 16 (diagram of Chapman ignition-suppressor system).) With the switch closed, some of the current in the ignition circuit was diverted to the ignition suppressor, which was a diode; up to

a certain voltage, a diode is a one-way street for electricity. (Tr. at A161, A296, A312-13.) The remaining current flowing to the distributor was insufficient to fire the spark plug and cause ignition. (Id. at A161; A312-13.)

LEGAL ANALYSIS

Only one element of claim 11 is at issue: the "disabling switch means connected in series with the ignition switch for opening said ignition circuit." Plaintiffs argue that defendants' ignition suppressor infringed this element literally or under the doctrine of equivalents. Defendants contend that (1) their ignition suppressor did not literally infringe this element, (2) the differences between their ignition suppressor and this element were so great that no reasonable fact-finder could find equivalence infringement, and (3) plaintiffs' actions during the prosecution of the patent estop plaintiffs from arguing that defendants' ignition suppressor was equivalent to claim 11's "disabling switch means." Both parties rely heavily on the record of the first trial.

The central question is whether any jury reasonably could have found that the accused products literally or by equivalence infringed Claim 11 as properly construed. "If the evidence presented in the first trial would not suffice, as a matter of

law, to support a jury verdict under the properly formulated defense, judgment c[an] properly be entered for the respondent at once, without a new trial." Exxon Chem. Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1559 (Fed. Cir. 1995) (citing Boyle v. United Techs. Corp., 487 U.S. 500, 513-14, 108 S.Ct. 2519 (1988)).

Before analyzing infringement, the Court must address two preliminary issues. First, defendants contend certain of their systems used a "starter interrupt" rather than an ignition suppressor. Plaintiffs counter that defendants have not proven their use of a starter interrupt. Plaintiffs, however, do not argue that systems using a starter interrupt would infringe, and the Court finds that plaintiffs have waived this argument. In light of the Court's infringement analysis of the ignition suppressor - set out below - the Court need not reach when (if ever) defendants implemented the starter interrupt.

Second, plaintiffs occasionally suggest that the "disabling switch means" in defendants' systems was not the ignition suppressor itself, but rather the switch located on the ignition suppressor branch of the ignition circuit. But plaintiffs have not presented any evidence or expert testimony that this switch, standing alone, would have performed the function of the

disabling switch means. Moreover, most of plaintiffs' arguments at trial and in its post-trial briefs are aimed at the ignition suppressor itself. Unless otherwise specified, the Court will use the term "ignition suppressor" to refer to all elements located on the ignition suppressor branch of the circuit, including the switch and the ignition suppressor proper.

I. Construction of "Disabling Switch Means"

A. Rules for Means-Plus-Function Elements

The parties - and the Court - agree that the claim element at issue is written in "means-plus-function" format; such elements are governed by 35 U.S.C. § 112, ¶ 6 (1994):

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

This provision "represents a quid pro quo by permitting inventors to use a generic means expression for a claim limitation provided that the specification indicates what structure(s) constitute(s) the means." Amtel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999).

"After a court establishes that a means-plus-function limitation is at issue, it must then construe the function

recited in that claim and determine what structures have been disclosed in the specification that correspond to the means for performing that function." Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1361 (Fed. Cir. 2000). The Court determines the disclosed structure(s) corresponding to the means limitation by examining the written description and the accompanying drawings.

The literal scope of a means-plus-function element includes not only the disclosed structure(s), but also equivalent structures. See 35 U.S.C. § 112, ¶ 6; see also Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1457 (Fed. Cir. 1998) ("Under § 112, ¶ 6, an accused device with structure not identical to the structure described in the patent will literally infringe the patent if the device performs the identical function required by the claim with a structure equivalent to that described in the patent.") (emphases added). A means-plus-function equivalent structure is one that performs "the identical function, in substantially the same way, with substantially the same result." Kemco, 208 F.3d at 1364.

This test is a variation on the traditional function-way-result test used for the doctrine of equivalents. The doctrine of equivalents expands the scope of a patent beyond "its literal

terms . . . [to] embrace[] all equivalents to the claims described," Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., ___ U.S. ___, 122 S.Ct. 1831, 1837 (2002), but "[e]ach 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 the to the invention as a whole." Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997).

The key distinction between traditional equivalence analysis and mean-plus-function analysis is that means-plus-function equivalents must perform the identical function of the disclosed structure, whereas traditional equivalence analysis requires the equivalent structure to perform substantially the same function. See Kemco, 208 F.3d at 1364. Because the traditional test is less stringent, even if an accused structure is not a means-plus-function equivalent, it "may nevertheless still be an 'equivalent' under the doctrine of equivalents." Id.

B. Application of Means-Plus-Function Rules to "Disabling Switch Means"

As mentioned above, the "disabling switch means . . . for opening said ignition circuit" is the only element at issue.

Plaintiff Aureo E. Rivera testified that this element should be construed broadly:

All - anything that you use to switch current on and off in a circuit, in the ignition circuit is a disabling switch means. Ours is a means function claims. That means, and pardon the redundancy, that anything - means is almost equivalent, synonymous to thing. So any means, any thing, any device that can be used to disable the ignition circuit via a switching, switching just means changing from one disposition to another disposition, anything that does that is an ignition disabling switch means.

(Tr. at A245.)

Rivera misapprehends the nature of means-plus-function language. Means-plus-function language does not provide a blanket entitlement to all structures performing the recited function. Rather, "because of the statutory limitations governing the meaning of means-plus-function elements, courts must limit the scope of these claim elements to the corresponding structure disclosed in the specification and its equivalents." Signtech U.S.A., Ltd. v. Vutek, Inc., 174 F.3d 1352, 1358 (Fed. Cir. 1999).

The Court begins by construing the function of the "disabling switch means" and determining the corresponding structure disclosed in the specification. See Kemco, 208 F.3d at

1361. The function of the "disabling switch means" is "opening said ignition circuit in response to displacement of the lock means to the lock position." An "open circuit" is "an electrical circuit in which the continuity is broken so that current does not flow," Webster's Third New International Dictionary at 1579, so "opening a circuit" means "breaking the flow of current through a circuit." See id.; see also Texas Digital Sys., Inc. v. Telegenix, Inc., No. 02-1032, ___ F.3d ___, 2002 WL 31307212 at *5 (Fed. Cir. Oct. 16, 2002) (stating that "it is entirely proper" for a court to consult dictionaries "at any stage of a litigation, regardless of whether they have been offered by a party in evidence or not").

The '373 patent discloses a single corresponding structure: a simple electrical switch, which can be opened and closed. This structure is labeled "34a" in figure 2 of the patent, and is described in the written description:

[A]n electrical connection is established from the power output terminal of the battery through the closed switch section 34b to the ignition coil 152 which in turn is electrically connected through the closed disabling switch section 34a to the grounded distributor 154. . . . [D]isplacement of the activating rod 38 to the lock position not only opens the by-pass switch section 34b but also opens the disabling switch section 34a so that the ignition circuit cannot be closed

by some unauthorized by-pass of the ignition switch 148.

(Col. 5, ll. 13-18, 29-33 (emphases added).) The ignition disabling switch in the Rivera patent is placed between the coil and the distributor. When opened, the disabling switch section 34a cuts off the flow of electricity from the car battery to the distributor - i.e., it opens the ignition circuit - thereby disabling the ignition.

Plaintiffs argues that claim 11 should be construed to cover all systems that prevent the spark plug from firing, including those that reduce - but do not break - the flow of current to the distributor. Plaintiffs contend that by preventing the spark plug from firing, current-reduction systems effectively "open" the ignition circuit. But the means-plus-function nature of Claim 11 limits plaintiffs to the disclosed structure, which breaks - not reduces - the flow of current to the distributor. Likewise, plaintiffs' claim construction theory depends on the state of current at the spark plug, but the spark plug is nowhere mentioned in the '373 patent. A mean-plus-function claim cannot be construed by reference to technology outside the specification. See, e.g., Signtech, 174 F.3d at 1358.

C. Meaning of "Connected in Series to the Ignition Switch"

Claim 11 specifies that the disabling switch means must be "connected in series to the ignition switch." Plaintiffs define series as "a number of things or events arranged in order and connected by being alike in some way." This generic definition will not suffice. "Series" is a term of art in the electrical field, meaning "an arrangement of the parts of or elements in an electric circuit whereby the whole current passes through each part or element without dividing or branching - contrasted with parallel." Webster's Third New International Dictionary at 2073. Thus, "connected in series with the ignition switch" means "connected in way that enables the whole current to pass through both the disabling switch means and the ignition switch without dividing or branching."⁴

II. Comparison of Claim 11's "Disabling Switch Means" with Defendants' Ignition Suppressor

Once the Court construes a claim, the patent-holder bears the burden of supplying "sufficient evidence to prove that the accused product or process contains, either literally or under

⁴ This definition is consistent with plaintiffs' own rendition of the claim 11 structure, set out in Drawing # 2 in Plaintiffs' Motion Submitting Drawings; Drawing # 2 depicts a circuit in which the whole current passes through the ignition circuit without branching. (See Docket No. 350 at Drawing # 2.)

the doctrine of equivalents, every limitation of the properly construed claim." Seal-Flex, Inc. v. Athletic Track and Court Constr., 172 F.3d 836, 842 (Fed. Cir. 1999). Here, the record consists primarily of the trial testimony and the exhibits.

A. Identical Structure?

The defendants' ignition suppressor was not identical to the disabling switch structure disclosed in the '373 patent, but rather differed in two material respects. First, the ignition suppressor did not break the flow of electricity to the distributor. Indeed, plaintiffs's expert Dr. Manuel Rodriguez Peraza explained that the ignition suppressor "allow[ed] some voltage, not enough. And Mr. Rivera's [disabling switch means] allows no voltage." (Tr. at A360.)

Second, the ignition suppressor was not connected in series with the ignition switch (i.e., connected in way that enabled the whole current to pass through both the disabling switch means and the ignition switch without dividing or branching). It is undisputed that the ignition suppressor was located on a branch off of the ignition circuit.⁵ Activation of defendants' security

⁵ Indeed, the Plaintiff's own rendition of defendant's system locates the ignition suppressor on a branch off the circuit. See (Pls. Mot. Submitting Drawings (Drawing #3).)

system closed the switch on the ignition suppressor branch, which caused the current in the ignition circuit to divide and branch. (Id. at A312-13, A360; Docket No. 330 at Ex. 16 (diagram of Chapman ignition-suppressor system).) In short, plaintiffs cannot seriously dispute that the ignition suppressor was connected in parallel, not in series.

B. Equivalent Structure?

Plaintiffs' principal argument for infringement is equivalence; as plaintiff Aureo E. Rivera testified at trial, "[defendants'] ignition suppressor is equivalent to the element of our claim eleven which the disabling switch means, ignition disabling switch means." (Tr. at A147.) Evaluating this argument requires application of (1) the section 112, paragraph 6 equivalence test (identical function-substantially the same way-substantially the same result) and (2) the doctrine of equivalents test (substantially the same function-substantially the same way-substantially the same result).

Under the "substantially the same way" prong shared by the two tests, the undisputed evidence shows that the ignition suppressor operated in a substantially different way than claim 11's disabling switch means. Claim 11's disabling switch means is a simple switch that breaks the flow of current to the

distributor. Defendants' ignition-suppressor system took a markedly different approach, reducing - but not eliminating - the flow of current to the distributor by diverting some current to a diode (i.e., the ignition suppressor itself) located on a parallel pathway.

This substantial difference as to "way" defeats plaintiffs' equivalence claim under both section 112, paragraph 6 and the doctrine of equivalents. As the Federal Circuit has stated, "Because the 'way' and 'result' prongs are the same under both the section 112, paragraph 6 and doctrine of equivalents tests, a structure failing the section 112, paragraph 6 test under either or both prongs must fail the doctrine of equivalents test for the same reason(s)." Kemco, 208 F.3d at 1364; see also Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1311 (Fed. Cir. 1998) (finding no infringement under either section 112, paragraph 6 or the doctrine of equivalents, because the accused device operated in "a substantially different way").

III. Prosecution history estoppel

Alternatively, defendants argue that the Riveras' actions before the PTO estop them from arguing that defendants' ignition suppressor is equivalent to claim 11's disabling switch means. Prosecution history estoppel prevents a patentee from invoking

the doctrine of equivalents to reclaim subject matter surrendered during prosecution. See generally Festo, 122 S.Ct. 1831. Moreover, while plaintiffs are entitled to a range of equivalents in considering literal infringement under 35 U.S.C. § 112, § 6, the policies underpinning prosecution history estoppel apply with equal force to a means-plus-function analysis of literal infringement by equivalents. See Alpex Computer Corp. v. Nintendo Co. Ltd., 102 F.3d 1214, 1221 (Fed. Cir. 1996) ("Just 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 § 112, ¶ 6."). "The relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter." Cybor, 138 F.3d at 1457.

Claim 1 of the Riveras' original patent application included the element of a "disabling switch means." On November 10, 1969, the PTO examiner rejected this claim as unpatentable over the prior art. On February 16, 1970, the Riveras filed an amendment to their patent application. The amendment added language to claim 1 (which was later incorporated into claim 11) specifying that the "disabling switch means" was "connected in series with

the ignition switch." This language tracked the structure of the "disabling switch section 34a" disclosed in the specification.

The Riveras argued to the PTO examiner that

Claim 1 particularly as amended therefore clearly defines in a patentable sense over the prior art references cited of record by specifying, "disabling switch means connected in series with the ignition switch for opening said ignition circuit in response to displacement of the lock means to the lock position."

The PTO examiner allowed the claim as amended. In view of the Riveras' claim amendment, defendants reasonably could have believed that the Riveras surrendered any claim to devices like defendants' ignition suppressor, as such devices were not "connected in series" with the ignition switch.

Plaintiffs' battery of arguments to the contrary are unavailing. The contention that the amendment of claim 1 did not limit claim 11 is groundless, as the text of claim 1 was incorporated into claim 11. See Builders Concrete, Inc. v. Bremerton Concrete Prods. Co., 757 F.2d 255, 260 (Fed. Cir. 1985) ("The fact that the 'passage' clause of patent claim 10 was not itself amended during prosecution does not mean that it can be extended by the doctrine of equivalents to cover the precise subject matter that was relinquished in order to obtain allowance of claim 1."); Glaxo Wellcome, Inc. v. IMPAX Labs., Inc., 220

F.Supp.2d 1089 (N.D.Cal. 2002) ("Prosecution history estoppel extends to unamended claims where the challenged element was amended elsewhere in the patent."). Plaintiffs' suggestion that the amendment to claim 11 was not made for reasons of patentability is belied by the Riveras' argument to the PTO examiner that "[c]laim 1 particularly as amended therefore clearly defines in a patentable sense over the prior art references cited of record." (Emphasis added.)

The Riveras' surrender of ignition-suppressor-type devices was confirmed during the reexamination proceedings. During these proceedings, the PTO examiner stated that U.S. Patent No. 3,282,369 (issued to Arthur Pangborn) raised a substantial new question of patentability. Plaintiffs responded:

[The Pangborn patent's] control member consists of a "housing box" with combination lock, a switch for grounding the ignition current and a "latch plunger." This configuration is different from Rivera et al in that Rivera et al. utilizes a key controlled push lock. The Rivera system is a more simple and direct operation which is a definite improvement over Pangborn's separate combination locking and unlocking by "an operating knob projecting from said housing" (see Claim 4) and another push/pull knob operation for the hood. Additionally, Rivera '373 does not ground the ignition but rather opens it to protect from 'hot wire' starts."

(Emphases added.) Thus, the Riveras distinguished their

invention from systems that prevented ignition by "grounding" the ignition current. In the instant case, plaintiffs' expert Dr. Rodriguez Peraza stated that the defendants' ignition suppressor diverted current "to ground." (Tr. at A360.)

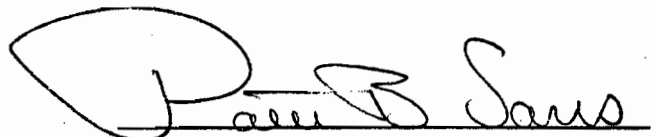
Their expert's testimony notwithstanding, plaintiffs now contend that defendants' ignition suppressor did not divert current to ground and cite, as evidence, two "Chapman Service Bulletins" for the devices. Defendant responds that these drawings of the accused devices have universal notations that indicate grounding. One Chapman Service bulletin includes two drawings, one depicting a "straight wire ground" configuration and the other showing the ignition suppressor. Unlike the straight wire ground, which directly grounded the vehicle's ignition coil, the ignition suppressor diverted the spark energy from the coil into the suppressor. While there was no direct grounding of the ignition coil, the ignition suppressor did eventually ground the diverted energy. Moreover, it is undisputed that the infringement suppressors were based in part on U.S. Patent No. 3,538,725 (issued to Louis F. Guenther and assigned to Chapman), which disables the car by "grounding out" the electrical circuit. Col. 3, ll. 17-24. Thus, the plaintiffs' reexamination statements distinguishing grounding

devices provide additional support for holding plaintiffs estopped from arguing equivalence as a basis for infringement.

CONCLUSION AND ORDER

The Court concludes that defendants do not infringe claim 11, either literally or by equivalence. As an alternative holding, the Court finds that prosecution history estoppel precludes plaintiffs from asserting infringement by equivalence.

The Court **ALLOWS** Defendants' motion for summary judgment of non-infringement (Docket No. 331), and **DENIES** Plaintiffs' cross-motion for summary judgment of infringement (Docket No. 338).

A handwritten signature in black ink, appearing to read "Patti B Saris". The signature is written in a cursive style with a large, looped initial "P".

PATTI B. SARIS

United States District Court