

United States District Court,
E.D. Michigan, Southern Division.

LACKS INDUSTRIES, INC,
Plaintiff.

v.

**McKECHNIE VEHICLE COMPONENTS USA, INC., d/b/a Thompson International, and Hayes
Wheels International, Inc,**
Defendants.

July 1, 1999.

Owner of patents for automobile wheel covers sued competitors for infringement. On defendant's motions for summary judgment, the District Court, Feikens, J., held that: (1) claims in two patents and all but one claim in third patent were not literally infringed; (2) fact issue existed as to whether remaining claim in third patent was literally infringed; (3) claims in two patents and some claims in third patent were invalid as obvious.

Motions granted in part and denied in part.

5,597,213. Invalid in part.

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OPINION

FEIKENS, District Judge.

Introduction

Before me is a multi-patent infringement dispute between competitors in the automotive wheel cover industry. Defendants McKechnie Vehicle Components USA, Inc. ("McKechnie") and Hayes Wheels International, Inc. ("Hayes") have jointly filed six cross-motions for partial summary judgment, raising numerous issues of literal noninfringement and patent validity. Plaintiff Lacks Industries, Inc. ("Lacks") has filed a cross-motion for partial summary judgment on the issue of literal infringement.

I. Background

All three parties are involved in the manufacture and sales of cladded wheels: automotive wheels that have a decorative cover, or cladding, attached to their outer face (the side facing out from the automobile). Cost and aesthetic considerations have driven the development of cladded wheels. Automobile buyers increasingly desire wheels with a shiny chrome look, and automobile manufacturers and suppliers want to meet this growing consumer demand without having to plate the entire wheel in chrome—apparently an expensive process. Chrome-plated cladding is the compromise. Attached as a snug, plastic or metal skin over the outer wheel face, cladding gives the wheel a chrome look, but at less cost than full chrome-plating of the wheel itself.

On June 25, 1992, plaintiff's Product Development Director, Lee Chase, filed a patent application, No. 904,180, with the U.S. Patent Office, in which he claimed various cladded wheel inventions. During the course of its prosecution, that original application was divided into at least two parts. One part, re-filed on June 7, 1995, was later issued as U.S. Patent No. 5,577,809 ("the '809 patent") on November 26, 1996. The other part, re-filed on March 29, 1995, was later issued as U.S. Patent No. 5,636,906 ("the '906 patent") on June 10, 1997. Further experiments led Chase to apply for a third patent on June 6, 1995. This application resulted in U.S. Patent No. 5,597,213 ("the '213 patent"). Chase is listed as the inventor on all three patents, and Lacks as the assignee. Lacks presently manufactures, assembles, and sells a cladded wheel product based on the '809, '906, and '213 patents.

In mid-1992, Jeff Beam, an employee of defendant McKechnie, also conceived a cladded wheel invention. He filed his application on September 3, 1993, and the patent was issued on November 29, 1994 as No. 5,368,370 ("the '370 patent" or "the Beam patent"). Beam is listed as the inventor, and McKechnie as the assignee. McKechnie has worked with Hayes to manufacture, assemble, and sell a cladded wheel product based on the '370 patent.

Lacks' suit against McKechnie and Hayes alleges infringement of its '809, '906, and '213 patents. These defendants have argued in response that their accused product does not infringe Lacks' patents and that Lacks' patents are invalid and unenforceable. A consent order issued August 7, 1998 dismissed with prejudice certain claims of the '809, '906, and '213 patents. The parties' seven summary judgment motions address issues arising out of the remaining claims.

II. Summary Judgment Standard

Federal Rule of Civil Procedure 56(c) provides that a summary judgment shall issue "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." A genuine issue of material fact does not exist "[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). The movant has the burden of showing that no genuine issue of material fact exists. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986).

Once the movant meets its Rule 56(c) burden, the nonmovant "must set forth specific facts showing that there is a genuine issue for trial." Fed.R.Civ.P. 56(e). "The mere existence of a scintilla of evidence in support of the [nonmovant's] position will be insufficient; there must be evidence on which the jury could

reasonably find for the [nonmovant]." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). When weighing the evidence offered by the parties on a motion for summary judgment, I must view the evidence and all inferences drawn from that evidence "in the light most favorable to the party opposing the motion." *Matsushita*, 475 U.S. at 587, 106 S.Ct. 1348.

III. Literal Infringement

In its cross-motion for partial summary judgment, Lacks asserts that defendants have literally infringed claim 1 of its '809 patent, claims 1, 11, and 16 of its '906 patent, and claims 25 and 40 of its '213 patent. In their motions for partial summary judgment, defendants assert literal noninfringement with respect to claims 1 and 2 of the '809 patent, claims 1, 2, 4-6, 8, 9, 11, 12, and 14-16 of the '906 patent, and claims 1, 3, 7-9, 32, 35, 37-39, and 40 of the '213 patent. Because Lacks does not contest defendants' literal noninfringement assertions with respect to claims 7, 9, 32, 35, 37, 38, and 39 of the '213 patent, only claims 1, 3, 8, 25, and 40 of that patent are in dispute in the noninfringement motions before me. The parties do not raise an issue of infringement under the doctrine of equivalents.

[1] [2] To establish literal infringement, "every limitation set forth in a claim must be found in the accused product or process exactly." *Becton Dickinson and Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 796 (Fed.Cir.1990). Determining literal infringement is a "two-step process." *Id.* In the first step I must determine the meaning and scope of the claims in dispute: a step "more commonly known as claim construction." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed.Cir.1995). The second step requires me to compare the construed claims with the product or process accused of infringement. *Id.* The first step is a question of law, *see id.* at 979, while the second step is a question of fact, *see North American Vaccine v. American Cyanamid Co.*, 7 F.3d 1571, 1574 (Fed.Cir.1993).

[3] [4] When construing a claim under the first step, I must consider the intrinsic evidence of record: the claim language, the specification, and, if produced, the prosecution history. *See Markman*, 52 F.3d at 979. "The appropriate starting point, however, is always with the language of the asserted claim itself." *Phonometrics, Inc. v. Northern Telecom, Inc.*, 133 F.3d 1459, 1464 (Fed.Cir.1998). This is so because "[t]he language of the claims...defines the bounds of the patentee's exclusive rights." *Wiener v. NEC Electronics, Inc.*, 102 F.3d 534, 539 (Fed.Cir.1996).

[5] [6] [7] In construing the claim language at issue, I am guided by the principle that "claim language is interpreted to ascertain the meaning that a person of ordinary skill in the art would give to the claims in dispute." *Schering Corp. v. Amgen, Inc.*, 18 F.Supp.2d 372, 380 (D.Del.1998) (citing *Wiener*, 102 F.3d at 539). Although words in a claim generally have their ordinary meaning, "a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). Even when a patentee does not give a word a special meaning, the specification still "acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." *Id.* As such, the specification is often "the single best guide to the meaning of a disputed term." *Id.*

[8] [9] [10] If the intrinsic evidence does not resolve the ambiguities of disputed claim language, I may then consider extrinsic evidence, such as expert testimony regarding how those skilled in the art would interpret the disputed claim. *See id.* at 1583. While extrinsic evidence may be used "as an aid in arriving at the proper construction of the claim," it "may not be used to vary or contradict the otherwise unambiguous meaning of

the claim." *Desper Products, Inc. v. QSound Labs., Inc.*, 157 F.3d 1325, 1333 (Fed.Cir.1998). In most cases, intrinsic evidence will suffice to resolve ambiguity, and so, in those cases, any consideration of the extrinsic evidence would be "improper." *See Vitronics*, 90 F.3d at 1583.

The parties have not formally treated the *Markman* issue of claim construction as separate from the other issues in this case. In other words, the parties have subsumed their disputes over the meaning and scope of claim language within their larger arguments concerning literal infringement and/or validity. I do not find this problematic, however, because they have thoroughly identified the disputed claims-through their extensive pleadings and three hearings before me-and have, for the most part, either explicitly or implicitly offered their preferred constructions of those claims.

Based on the record before me, I am satisfied that I can "independently assess the claims, the specification, and if necessary the prosecution history, and relevant extrinsic evidence, and declare the meaning of the claims." *Exxon Chemical Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1556 (Fed.Cir.1995). The claims I interpret are those the parties have debated with respect to their meaning and scope. I emphasize that my *Markman* construction of the disputed claims serves only to determine the meaning a person of ordinary skill in the art of cladded wheels would give to those claims. *See Wiener*, 102 F.3d at 539.

With these points in mind, I turn to my duty under *Markman* to interpret the scope of the disputed claims of the '809, '906, and '213 patents. I will consider the legally distinct issue of indefiniteness separately. *See Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053 (Fed.Cir.1989) ("Ambiguity, undue breadth, vagueness, and triviality are matters which go to claim *validity* for failure to comply with 35 U.S.C. s. 112, para. 2, not to interpretation or construction") (emphasis in original).

A. Claim Construction

1. The '809 Patent

Lacks' '809 patent describes a process for attaching the cladding to the outer wheel face. The '809 patent is thus a method patent consisting of three claims. Claim 3 has been dismissed with prejudice from this action by consent of the parties. Claim 1 teaches:

1. A method for providing a decorative surface on a vehicle wheel having a web portion and a peripheral rim portion for mounting a tire, said peripheral rim portion defining an axial peripheral lip circumscribing said peripheral rim portion and structural means interconnecting said web portion and said peripheral rim portion, said web portion and said peripheral rim portion defining a wheel face outer surface, said method comprising the steps of:

forming a thin solid ornamental panel (22) of uniform thickness having an interior and exterior surface, said thin solid formed ornamental panel being shaped to cover said entire wheel face outer surface and not cover said axial peripheral lip so as to mate to said wheel and substantially conform said exterior surface of said thin solid formed ornamental panel to adjacent contours of said wheel face outer surface of said wheel;

applying a decorative layer (24) on said exterior surface of said thin solid formed ornamental panel;

applying an adhesive (30) to one of said wheel face outer surface of said wheel and said interior surface of said thin solid formed ornamental panel; and

positioning said interior surface of said thin solid formed ornamental panel against said adhesive so as to adhere said thin solid formed ornamental panel to said wheel face outer surface;

whereby said positioning step locates said thin solid formed ornamental panel so as to be substantially flush with adjacent portions of said wheel face outer surface of said wheel such that said decorative layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion so as to provide a visual impression that said decorative layer is substantially flush with said adjacent portions of said wheel face outer surface and thereby appears to constitute an integral portion of said wheel.

'809 patent, col.'s 10-12. Claim 2 depends on claim 1 and so it teaches: "The method of claim 1 wherein said adhesive is applied to a recess formed in said wheel face outer surface of said wheel and said thin solid formed ornamental panel is positioned in said recess." '809 patent, col. 12, lines 11-14. The parties dispute the meaning of several words and phrases shared by claims 1 and 2.

a. "axial peripheral lip"

[11] Lacks construes the axial peripheral lip to be some portion, but not all, of the rim lip. Lacks argues that an uncovered portion of the wheel surface exists between the edge of the cladding panel and the location of the structure it believes is the axial peripheral lip. Defendants construe the axial peripheral lip more broadly, arguing that it is all of the uncovered surface between the edge of the cladding panel and the edge of the tire mounting surface of the wheel rim. FN1

FN1. Defendants propose this construction as an alternative to their primary argument that this phrase is indefinite. As I noted above, I will return to defendants' indefiniteness arguments later in the opinion. First, however, I must render a *Markman* interpretation of the disputed language. I discuss defendants' alternative construction because it assists me in this task.

My construction of "axial peripheral lip" must begin with the language of claim 1. *See Phonometrics*, 133 F.3d at 1464. The phrase first appears in the claim's preamble: "[a] method for providing a decorative surface on a vehicle wheel having a web portion and a peripheral rim portion for mounting a tire, said peripheral rim portion defining an *axial peripheral lip* circumscribing said peripheral rim portion." '809 patent, col. 10, lines 65-67 and col. 11, lines 1-2 (emphasis added). It next appears in the "forming" step: "said thin solid formed ornamental panel being shaped to cover said entire wheel face outer surface and not cover said *axial peripheral lip*." '809 patent, col. 11, lines 8-11 (emphasis added). It last appears in the "whereby" step: "whereby said positioning step locates said thin solid formed ornamental panel so as to be substantially flush with adjacent portions of said wheel face outer surface of said wheel such that said decorative layer readily blends with said *axial peripheral lip* circumscribing said peripheral rim portion." '809 patent, col. 12, lines 1-6.

These references to "axial peripheral lip" imply critical limitations on its meaning. Accordingly, after reading claim 1, it would be evident to an individual of ordinary skill in the art of cladded wheels FN2 that the axial peripheral lip must be located on the wheel rim or peripheral rim portion, that it is not covered by the panel FN3, that it must begin where the panel ends FN4, and that it touches the edge of the decorative layer in such a way that aesthetic blending occurs.

FN2. See the obviousness discussion, *infra*, in Part IV.A.4 of this opinion for the standard I have adopted

for one of ordinary skill in the art of cladded wheels.

FN3. My reference to "cladding panel" is purposeful. As is clear from the language of claim 1, the cladding is the sum of two elements: the ornamental panel and a decorative layer applied only to the exterior of that panel. The parties have sometimes conflated these elements, treating the panel and the layer as one and the same even though the claim language places different limitations on each. To end this confusion, I will impose some precision. In this opinion, "panel" or "cladding panel" refers to the panel element of the cladding. "Layer" or "decorative layer" refers to the layer element of the cladding. "Cladding" refers to the structure that is the combination of the panel and the decorative layer.

FN4. To put it another way, the cladding and the axial peripheral lip terminate along the same boundary.

The specification reinforces these limitations. It does not mention the phrase "axial peripheral lip," but does use the nearly identical phrase "peripheral lip." It reads in pertinent part: "The wheel 11 of the composite wheel 10 includes a wheel disk 18 which defines an outboard surface of the composite wheel 10, a peripheral rim portion or rim 12 with a peripheral lip 12a." '809 patent, col. 6, lines 56-60. Figures 3 and 5 of the specification clearly illustrate the location of the rim (labeled 12) and the peripheral lip (labeled 12a). These figures show that the peripheral lip structure projects out from the rim and is not covered by the cladding (labeled 20). Its shape and location, as well as its relation to other structures on the composite wheel, correspond with claim 1's implicit limitations on the axial peripheral lip.

Even if it were not clear that the phrases "axial peripheral lip" and "peripheral lip" refer to the same structure, the prosecution history makes it clear that they do. During the course of the '809 patent's prosecution, the patent examiner concluded that the term "axial peripheral lip" did not have a "proper antecedent basis" in the specification. (Joint Ex. 189, Submission of Amendments to Patent Examiner at 5.) Lacks' patent attorney responded by proposing the following amendment to the '809 application:

The undersigned takes issue with this conclusion on the basis that it is clear to a person ordinarily skilled in the art that every wheel that is used on an automobile has a peripheral rim portion with an axial peripheral lip. Accordingly, the drawings as exemplified by Figures 3 and 4 [of the '809 patent application] identify the rim portion by reference character 12 and *for the purpose of clarifying the axial peripheral lip, reference character 12a has been added to identify the axial peripheral lip*. Therefore, it is respectfully suggested that the language of the claims objected to by the Examiner is supported by the specification, at least in the drawings thereof, and would certainly be within the knowledge of a person ordinarily skilled in the art.

(Id. at 6 (emphasis added).) The examiner apparently agreed to this amendment because reference numeral 12a can be found in the '809 patent in Figure 3, in Figure 5, and at col.6, line 60. Numeral 12a is the reference marker attached to "peripheral lip" in the specification. *See* '809 patent, col. 6, line 60. Thus the omission of "axial" from the specification text, due to poor drafting, does not prevent a person of ordinary skill in the art from concluding that the peripheral lip of the specification and the axial peripheral lip of the claim language are the same element.

In light of the claim language, the specification, and the prosecution history before me, I conclude that the intrinsic evidence of record would lead a person of ordinary skill in the art of cladded wheels to understand

claim 1's axial peripheral lip to be that uncovered surface of the composite wheel that starts at the edge of the cladding, goes up and over the top of the projecting rim lip, and ends where the outer side of the rim lip merges with the tire mounting surface of the wheel rim. This is defendants' construction. I choose it because the intrinsic evidence renders it the construction a person of ordinary skill in the art would choose. *See Exxon*, 64 F.3d at 1556.

Having determined that the intrinsic evidence is more than adequate for the construction of "axial peripheral lip," I further conclude that the parties' extrinsic evidence regarding the meaning of "axial peripheral lip" is unnecessary and thus improper for me to consider pursuant to *Vitronics*. See 90 F.3d at 1583.

b. "wheel face outer surface"

[12] Lacks argues that the "wheel face outer surface" is an element of claim 1 that has a flexible meaning and thus a varying location on the outer face of the wheel. Defendants argue that if it has any meaning at all, it must describe the entire area of the outer face of the wheel that exists within the circumscribing boundary of the axial peripheral lip.FN5

FN5. Once again, this construction is defendants' alternative argument to their primary argument that the phrase "wheel face outer surface" is indefinite.

Claim 1 first mentions "wheel face outer surface" near the end of its preamble:

A method for providing a decorative surface on a composite vehicle wheel having a web portion and a peripheral rim portion for mounting a vehicle tire, said peripheral rim portion defining an axial peripheral lip circumscribing said peripheral rim portion and structural means interconnecting said web portion and said peripheral rim portion, *said web portion and said peripheral rim portion defining a wheel face outer surface....*

'809 patent, col. 10, lines 65-67 and col. 11, lines 1-5. This passage indicates that the scope of "wheel face outer surface" bears some relation to the web portion, the peripheral rim portion, and the axial peripheral lip—at the least, that the "wheel face outer surface" includes exposed surface of the web and peripheral rim portions but not the axial peripheral lip. The claim's second, and more revealing, reference to the phrase cements its relationship to the axial peripheral lip: "said thin solid formed ornamental panel being shaped to cover said entire wheel face outer surface and not cover said axial peripheral lip." '809 patent, col. 11, lines 8-11.

Lacks argues from these references, and in particular from the use of the article "a" in the first reference, that the wheel face outer surface need not cover the total area of exposed surface within the circumscribing boundary of the axial peripheral lip. This construction fails, however, in light of my earlier construction of the axial peripheral lip, which concluded from the claim language that the axial peripheral lip and the cladding must abut each other. By sharing a common border, the axial peripheral lip and the cladding make it impossible for there to be exposed surface between them. This construction, furthermore, comports with the requirement that the cladding must cover the "entire wheel face outer surface" yet "not cover" the axial peripheral lip. Implicit in that requirement is the idea that the "wheel face outer surface" must be the area of exposed wheel surface that lies within the boundary of the circumscribing axial peripheral lip.

While the specification in a few places appears to suggest that the wheel face outer surface might be something less than the entire area within the boundary of the axial peripheral lip, those suggestions are outweighed by the central thrust of the specification's description, especially the diagrams of the preferred embodiment. Furthermore, as the invention of the '809 patent was intended to address a need in the prior art for a cladding that covered "the entire wheel surface," *see* '809 patent, col. 3, lines 62-67, and col. 4, lines 1-8, the phrase "wheel face outer surface" must mean the maximum extent of the wheel's exposed surface area that can be covered by the cladding while still heeding the "not cover said axial peripheral lip" limitation.

In light of the intrinsic evidence of record, I conclude that a person of ordinary skill in the art of cladded wheels would understand "wheel face outer surface," as used in claim 1 of the '809 patent, to mean the entire area of the wheel's exposed outer face that lies within the circumscribing boundary of the inner shoulder of the axial peripheral lip. I find it unnecessary to consider any extrinsic evidence because the intrinsic evidence of record FN6 has resolved the meaning and scope of "wheel face outer surface." *See id.*

FN6. Neither party has offered prosecution history evidence on "wheel face outer surface."

c. "not cover said axial peripheral lip"

[13] Defendants argue that this limitation on the scope of claim 1 teaches away from any invention where the cladding panel even partly covers the "axial peripheral lip": for instance, where the panel lies only halfway up the side of the lip, but does not rise over the top of the lip. Lacks argues, however, that the "not cover" limitation only teaches away from those inventions where the panel covers the projecting top of the "axial peripheral lip." The ordinary meanings of "cover" permit both constructions.FN7

FN7. *Webster's Third New International Dictionary* (1986) ("*Webster's* ") defines the verb "cover" to mean, among other things, "to lie over; spread over; be placed on or often over the whole surface of" and "to appear here and there on the surface of." Even though a dictionary is technically extrinsic evidence, the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit") has determined that judges may consult a dictionary "at any time" when construing claim terms, so long as the dictionary's definition does not contradict the definition supplied by the intrinsic evidence of the patent. *Vitronics*, 90 F.3d at 1584, n. 6. As will become clear, there is no contradiction.

Claim 1 states that the "ornamental panel" is "shaped to cover said entire wheel face outer surface and not cover said axial peripheral lip." '809 patent, col. 11, lines 9-11. In order to be consistent with my construction of "axial peripheral lip" and "wheel face outer surface," the "not cover" limitation must mean what defendants propose: that the panel cannot cover any portion of the axial peripheral lip structure. Furthermore, reason alone dictates that the "not" negates all possible ordinary meanings of "cover," absent a specific direction to the contrary in the specification or the prosecution history. *See id.* at 1582.

No such direction exists in the specification. Instead, cross-sectional drawings of the preferred embodiments (Figures 3 and 5) show the panel fitting snugly into the base of the shoulder of the axial peripheral lip. These drawings do not teach partial coverage of the axial peripheral lip structure.

With respect to the prosecution history, Lacks argued at the hearings that it had amended claim 1 and inserted the "not cover" limitation solely to distinguish the scope of claim 1 from prior art that taught a

cladding panel that went over the top of the "axial peripheral lip." In making that argument, Lacks has essentially asserted that it did not intend for the "not cover" limitation to teach away from all forms of coverage, but only to teach away from coverage of the top of the lip. While this may have been Lacks' intent, the prosecution history before me offers no persuasive evidence to support this argument.

Even if true, Lacks' contention about the purpose of the "not cover" limitation could not overcome the strong evidence of the claim language and the specification. I conclude therefore that a person of ordinary skill in the art of cladded wheels would understand the "not cover said axial peripheral lip" limitation of claim 1 to mean that the cladding panel cannot cover any portion of the "axial peripheral lip." Because the intrinsic record of evidence has resolved any ambiguities as to the meaning of the "not cover" limitation, I find it unnecessary to examine any extrinsic evidence on this issue (with the permissible exception of *Webster's*). See *id.* at 1583.

d. "substantially flush with adjacent portions"

[14] This disputed language appears in the "whereby" step of claim 1:

whereby said positioning step locates said thin solid formed ornamental panel so as to be substantially flush with adjacent portions of said wheel face outer surface of said wheel such that said decorative layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion so as to provide a visual impression that said decorative layer is substantially flush with said adjacent portions of said wheel face outer surface and thereby appears to constitute an integral portion of said wheel.

'809 patent, col. 12, lines 1-11. On the issue of indefiniteness, defendants argue that this passage suffers from an internal contradiction. FN8 In particular, they contend that the decorative layer cannot both readily blend with the axial peripheral lip and, at the same time, be substantially flush with adjacent portions of the wheel face outer surface. Defendants' contention is premised on "substantially flush with adjacent portions" meaning that the cladding is substantially on the same unbroken level with a horizontally surrounding portion of the wheel face outer surface. Lacks counters by arguing that "substantially flush" as used here means to closely abut and conform to the underlying wheel face outer surface. Both proposed constructions can fit within the plain meaning of the disputed phrase; according to *Webster's*, "flush" can mean "having or forming a continuous plane or unbroken surface" or "directly abutting on or immediately adjacent to."

FN8. This is, in fact, defendants' only construction argument for this claim language.

From my preceding interpretations, I have determined that a person of ordinary skill would understand that the wheel face outer surface and the axial peripheral lip are separate but bordering surfaces; that the cladding panel, which covers the entire wheel face outer surface, abuts the axial peripheral lip and thus leaves no exposed wheel face outer surface between it and the lip; and that the decorative layer on top of the panel runs into the axial peripheral lip in such a way as to readily blend. Given these explicit and implicit limitations, I find Lacks' construction of "substantially flush with adjacent portions" to be the meaning an individual of ordinary skill in the art would choose after reading claim 1.

The specification favors this conclusion. In discussing the prior art, it observes that an overlay is needed that "would be capable of closely conforming to the contours of the *entire* wheel surface." '809 patent, col. 6, lines 3-5 (emphasis added). Accordingly, the specification states that an objective of the '809 patent is "to

provide an ornamental overlay for a cast aluminum wheel in which the overlay closely conforms to the contours of the wheel. " '809 patent, col. 6, 6-9. Figures 3 and 5 of the preferred embodiments are the clearest statement in the specification of what is actually meant by "substantially flush with adjacent portions." These figures show panels that cover the entire wheel face outer surface and closely abut, or conform to, the styling features of that underlying surface. These figures also show that no wheel face outer surface is left uncovered; the panel and its decorative layer necessarily border the innershoulder of the axial peripheral lip in order to comply with the "entire wheel face outer surface" and "readily blends" limitations.

I conclude therefore that a person of ordinary skill in the art of cladded wheels, after reading claim 1 and the specification, would understand the phrase "substantially flush with adjacent portions" to mean that the cladding closely abuts or conforms to the underlying contours of the entire wheel face outer surface. Neither party has suggested that the prosecution history might alter this conclusion. Because the intrinsic evidence on "substantially flush with adjacent portions" is adequate for purposes of claim construction, I find it unnecessary to consider extrinsic evidence on the meaning of the phrase (once again, with the exception of *Webster's*). *See id.*

e. "applying an adhesive"

[15] Defendants construe this phrase as teaching only full face adhesive coverage on either the interior surface of the panel or the wheel face outer surface. Defendants base this argument on the affidavit of Lacks' own engineering expert, James D. Varin, in which Varin interprets the '809 patent to teach only full face coverage by the adhesive. Lacks argues, however, that it would be improper for me to consider the extrinsic evidence of Varin's expert testimony pursuant to *Vitronics*. Lacks contends that the disputed language does not limit the coverage of the adhesive, and therefore the language encompasses any pattern of adhesive coverage, whether it be full, selective, or random.

Claim 1 only refers to adhesive in the second "applying" step: "applying an adhesive to one of said wheel face outer surface of said wheel and said interior surface of said thin solid formed ornamental panel." '809 patent, col. 11, lines 17-19. Claim 2 also refers to adhesive but once: "The method of claim 1 wherein said adhesive is applied to a recess formed in said wheel face outer surface of said wheel and said thin solid formed ornamental panel is positioned in said recess." '809 patent, col. 12, lines 11-14.

It is clear that this language limits the application of the adhesive in only two ways, neither of which gives defendants' full face construction any support. The first limitation exists for both claims 1 and 2: the adhesive must be applied to either the wheel face outer surface or the interior surface of the panel. The second limitation is a specific requirement for cladded wheels assembled according to the method of dependent claim 2: adhesive must be applied to a recess formed in the wheel face outer surface. Both limitations are silent as to how the adhesive should cover the surfaces to which it must be applied.

The specification mentions the cladding panel adhesive only twice. The first reference discusses the type of adhesive to be used in the first preferred embodiment: "The overlay 20 can be permanently adhered directly to the outboard surface of the wheel 11 by a suitable adhesive 30, such as a silicone or polyurethane adhesive, to form a permanent wheel." '809 patent, col. 8, lines 5-8. The second reference discusses the way in which the adhesive is to be applied in the second preferred embodiment: "The panel 22 is adhesively bonded directly to the outboard surface of the wheel 11 either with a suitable adhesive 30 as shown, or in any other suitable manner." '809 patent, col. 9, lines 56-58, referring to Figure 5. While the first reference in the specification is silent on the issue of the extent, or pattern, of adhesive coverage, the second reference,

through its "any other suitable manner" language, clearly favors the broader construction of "applying an adhesive" offered by Lacks.

In light of the intrinsic evidence of record discussed above, FN9 I find that a person of ordinary skill in the art of cladded wheels would understand "applying an adhesive" as encompassing the full range of possible adhesive coverages not already within the prior art. The silence of the claim language on that point does not imply defendants' narrower construction of full face coverage. Rather, the silence indicates that the inventor did not consider the coverage of the adhesive to be an essential element of the '809 patent's claimed invention. Thus solely on the basis of questionable extrinsic evidence-Varin's affidavit-defendants have asked me to read into claims 1 and 2 an element that does not exist. Pursuant to *Vitronics*, I decline to do so. *See id.*

FN9. Neither party offered any prosecution history evidence on this issue.

2. The '906 Patent

The '906 patent is an apparatus patent, meaning it covers the physical form of the composite wheel invented by Lacks. It has sixteen claims. Claims 3, 7, 10, and 13 have been dismissed with prejudice from this case by consent of the parties. The remaining disputed claims read as follows:

1. An overlay for a composite decorative vehicle wheel, said wheel having a web portion and a peripheral rim portion for mounting a vehicle tire, said peripheral rim portion defining an axial peripheral lip circumscribing said rim portion and structural means interconnecting said web portion and said peripheral rim portion, said web portion and said peripheral rim portion defining a wheel face outer surface and a central axis, said overlay comprising:

an ornamental panel member covering said entire wheel face outer surface and not covering said axial peripheral lip, said ornamental panel member having a substantially uniform thickness; a first outboard surface; and an oppositely disposed second inboard surface, at least a portion of said second inboard surface of said ornamental panel member being juxtaposed a portion of said wheel face outer surface such that at least a portion of said first outboard surface of said ornamental panel member substantially conforms to said portion of said wheel face outer surface;

a decorative layer adhered to said first outboard surface of said ornamental panel member; and

an adhesive disposed between said ornamental panel member and said wheel face outer surface, said adhesive attaching said overlay directly to said wheel face outer surface;

whereby said decorative layer of said at least a portion of said first outboard surface substantially conforms with said portion of said wheel face outer surface such that said decorative layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion so as to provide a visible impression that said decorative layer is essentially flush with said wheel face outer surface.

2. The overlay of claim 1 wherein said portion of said wheel face outer surface is contoured and said at least a portion of said first outboard surface of said ornamental panel member is correspondingly contoured so as to closely conform to said portion of said wheel face outer surface.

* * * * *

4. The overlay of claim 1 wherein said overlay is attached to said wheel by said adhesive disposed along said portion of said wheel face outer surface.

5. An overlay for a composite decorative wheel, said wheel having a web portion and a peripheral rim portion for mounting a vehicle tire, said peripheral rim portion defining an axial peripheral lip circumscribing said peripheral rim portion and structural means interconnecting said web portion and said peripheral rim portion, said web portion and said peripheral rim portion defining a wheel face outer surface and central axis, said overlay comprising:

an ornamental panel member covering said entire wheel face outer surface and not covering said axial peripheral lip, said ornamental panel member having a substantially uniform thickness; a first outboard surface; and an oppositely disposed second inboard surface, at least a portion of said second inboard surface of said ornamental panel member being juxtaposed a portion of said wheel face outer surface such that said at least a portion of said first outboard surface of said ornamental panel member substantially corresponds to said portion to said wheel face outer surface;

a metal layer electrochemically plated onto said first outboard surface of said ornamental panel member; and

an adhesive disposed between said ornamental panel member and said wheel face outer surface, said adhesive attaching said overlay directly to said wheel face outer surface;

whereby when said overlay is attached directly to said wheel face outer surface by said adhesive, said metal layer of said at least a portion of said first outboard surface of said overlay substantially conforms with said juxtaposed portion of said wheel face outer surface such that said metal layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion of said wheel so as to provide a visible impression that said metal layer is essentially flush with said wheel face outer surface.

6. The overlay of claim 5 wherein said portion of said outer surface is contoured and said at least a portion of said first outboard surface of said ornamental panel member is correspondingly contoured so as to closely conform to said portion of said wheel face outer surface.

* * * * *

8. The overlay of claim 6 wherein said overlay is attached to said wheel by said adhesive disposed on said wheel face outer surface.

9. The overlay of claim 5 wherein said metal layer is a chromium plated layer.

* * * * *

11. A composite vehicle wheel having an ornamental cover, said composite vehicle wheel comprising:

a wheel having a web portion and a peripheral rim portion circumscribing said web portion for mounting a vehicle tire, said peripheral rim portion defining an axial peripheral lip circumscribing said peripheral rim

portion and structural means interconnecting said web portion and said peripheral rim portion defining an axially outwardly partly convexly contoured wheel face having an outboard surface; and

an overlay attached to said web portion and extending to said axial peripheral lip circumscribing said peripheral rim portion of said wheel, said overlay comprising:

an ornamental panel member covering said entire wheel face outboard surface and not covering said axial peripheral lip, said ornamental panel member having a substantially uniform thickness first outboard surface; and an oppositely disposed second inboard surface juxtaposed a portion of said outboard surface of said wheel face, at least a portion of said first outboard surface closely and uniformly conforming to said portion of said outboard surface of said wheel face;

a decorative layer adhered to said first outboard surface of said ornamental panel member; and

an adhesive disposed between said ornamental panel member and said outboard surface of said wheel face, said adhesive attaching said overlay directly to said outboard surface of said wheel face;

whereby when said overlay is attached directly to said outboard surface of said web portion of said wheel face by said adhesive at least a portion of said decorative layer of said first outboard surface substantially conforms with said outboard surface of said wheel face such that said decorative layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion so as to provide a visible impression that said decorative layer is essentially flush with said outboard surface of the wheel face.

12. The composite vehicle wheel of claim 11 wherein said portion of said outboard surface of said wheel face is contoured and said at least a portion of said first outboard surface of said ornamental panel member is correspondingly contoured so as to closely conform to said portion of said outboard surface of said wheels face.

* * * * *

14. The composite vehicle wheel of claim 11 wherein said overlay is attached to said web portion of said outboard surface of said wheel face by said adhesive disposed along said portion of said outboard surface of said wheel.

15. The overlay of claim 11 wherein said decorative layer is a chrome plate layer.

16. In a composite vehicle wheel having a wheel with a web portion and a peripheral rim portion circumscribing said web portion for mounting a vehicle tire, said peripheral rim portion defining an axial peripheral lip circumscribing said peripheral rim portion and structural means interconnecting said web portion and said peripheral rim portion, said web portion and said peripheral rim portion defining an axially outwardly partly convexly contoured wheel face having an outboard surface, an ornamental panel member covering said entire outboard surface of said wheel face and not covering said axial peripheral lip, said ornamental panel member being attached to said outboard surface of said wheel face, said ornamental panel member having a first outboard surface and an oppositely disposed second inboard surface, a portion of said second inboard surface juxtaposed a portion of said outboard surface of said wheel face, the improvement comprising:

an adhesive disposed between said ornamental panel member and said outboard surface of said wheel face, said adhesive attaching said ornamental panel member directly to said outboard surface of said wheel face;

a decorative layer adhered to said first outboard surface of said ornamental panel member;

said ornamental panel member being a thin panel of substantially uniform thickness; and

said first outboard surface having at least a portion closely conforming to an adjacent portion of said outboard surface of said wheel face;

whereby when said ornamental panel member is directly attached to said outboard surface of said wheel face by said adhesive at said portion of said second inboard surface, said decorative layer of said portion of said first outboard surface substantially conforms with said adjacent portion of said outboard surface of said wheel face such that said decorative layer readily blends with said axial peripheral lip circumscribing said peripheral rim portion so as to provide a visible impression that said decorative layer is essentially flush with said outboard surface of said wheel face.

'906 patent, col.'s 10-14.

The substance and language of the '906 and the '809 patents overlap to a great degree. They share identical specifications. They also share most of their claim language. The parties have consequently referred to the two patents together in their claim construction and literal infringement arguments. Furthermore, the parties dispute only those terms in the '906 patent that were also disputed in the '809 patent, with the exception of a new, synonymous term in the '906 patent.

The "axial peripheral lip" element and the "not cover said axial peripheral lip" limitation appear in each of the '906 patent's remaining independent claims-the 1, 5, 11, and 16-and thereby are also incorporated into the remaining dependent claims-the 2, 4, 6, 8, 9, 12, 14, and 15. I can find nothing in the parties' arguments or in the intrinsic evidence of record with respect to the '906 patent that would give these phrases a different meaning from that I have previously given them. Thus I find that a person of ordinary skill in the art would understand those phrases, as used in the '906 patent, to have the same meaning given them in the '809 patent.

The "wheel face outer surface" element appears in independent claims 1 and 5 of the '906 patent and thus is only incorporated into dependent claims 2, 4, 6, 8, and 9.FN10 As with "axial peripheral lip" and the "not cover" limitation, there is nothing in the parties' arguments or in the intrinsic evidence of record with respect to the '906 patent that would give these phrases a different meaning. Thus I also find that a person of ordinary skill in the art would understand "wheel face outer surface" as used in the '906 patent to have the same meaning given it in the '809 patent.

FN10. In the other remaining claims of the '906 patent, the drafter has apparently used "outboard surface" instead of "wheel face outer surface." The parties do not dispute the meaning of this phrase.

None of the claims of the '906 patent contain the disputed "substantially flush with adjacent portions" element. Instead, the drafter inserted "essentially flush" to describe the same limit: "said metal [decorative] layer is essentially flush with said wheel face outer surface." '906 patent, col. 12, lines 7-8. The "essentially

flush" element exists in all of the remaining claims of the '906 patent. The parties do not argue that "essentially flush" differs in any significant way from "substantially flush with adjacent portions." The intrinsic evidence of record points to no meaningful substantive differences between these synonyms for purposes of claim construction. Therefore I find that a person of ordinary skill in the art would understand "essentially flush," as used in the '906 patent, to have the meaning given "substantially flush" in the '809 patent.

Defendants also assert that the '906 patent teaches only a full face coverage of the adhesive. As they did with the '809 patent, defendants base this assertion solely on the extrinsic evidence of Varin's affidavit. I reject this argument for the same reasons I have previously stated.

3. The '213 Patent

The '213 patent is a method and apparatus patent for the assembly of a clad wheel by the use of a temporary securing and positioning means and through the selective application of an adhesive. It has forty claims. Claims 2, 4-6, 10, 14-19, 23, 26-31, 33, 34, and 36 have been dismissed with prejudice by consent of the parties. Of the remaining claims, only claims 1, 3, 8, 25, and 40 are in dispute on the issue of literal infringement; claims 25 and 40 by Lacks' motion and claims 1, 3, 8, and 40 on defendants' motion. The disputed claims read as follows:

1. A method for assembling an overlay to a wheel having a disk portion and a rim portion circumscribing said disk portion, said disk and rim portions defining an outboard surface of said wheel, said method comprising the steps of:

forming said overlay to have an inboard surface configured to face said outboard surface of said wheel upon assembling said overlay to said wheel;

providing a means, interposed said outboard surface of said wheel and said overlay, for temporarily securing said overlay to said outboard surface of said wheel and for positively positioning said overlay on said outboard surface of said wheel, said temporarily securing and positioning means causing said overlay to be centrally positioned with respect to said rim portion of said wheel and spaced from said outboard surface of said wheel so as to define at least one gap therebetween;

depositing a curable adhesive on at least one of said inboard and outboard surfaces such that said curable adhesive is between said overlay and said wheel upon assembling said overlay with said wheel; and

temporarily securing said overlay to said outboard surface of said wheel with said temporarily securing and positioning means so as to positively position said overlay centrally relative to said rim portion of said wheel and so as to form said at least one gap therebetween, said curable adhesive filling at least a portion of said at least one gap, such that said temporarily securing and positioning means maintains said overlay in position for a duration sufficient for said curable adhesive to permanently cure and thereby permanently secure said overlay to said wheel.

* * * * *

3. The method of claim 1 wherein said curable adhesive is an air-curable adhesive, and wherein said temporarily securing and positioning step comprises said curable adhesive filling a limited portion of said at

least one gap so as to provide a quantity of air trapped between said overlay and said wheel.

* * * * *

8. The method of claim 1 wherein said temporarily securing and positioning step comprises securing and positioning said overlay to said wheel with a fastener, said fastener constituting said temporarily securing and positioning means.

* * * * *

25. A method for assembling an overlay to a wheel, said method comprising the steps of:

forming said wheel to have a disk portion and a rim portion circumscribing said disk portion, said disk and rim portions defining an outboard surface of said wheel, said outboard surface having apertures formed therein;

forming said overlay to have an inboard surface configured to face said outboard surface upon assembling said overlay to said wheel, said overlay being configured so as to form a gap between said inboard and outboard surfaces upon assembling said overlay to said wheel;

depositing a curable adhesive on said outboard surface such that said curable adhesive is between said overlay and said wheel upon assembling said overlay with said wheel, said curable adhesive being selectively deposited along a peripheral edge of said outboard surface and around said apertures so as to exclude water and dirt from said gap upon assembling said overlay to said wheel; and

assembling said overlay to said outboard surface of said wheel with said curable adhesive so as to form said gap and permanently secure said overlay to said wheel, at least one void being present between said overlay and said outboard surface of said wheel, said at least one void entrapping air between said overlay and said wheel.

* * * * *

40. In a composite vehicle wheel having a wheel with a web portion and a rim portion circumscribing said web portion, said web portion defining an outboard surface of said composite vehicle wheel, an ornamental panel member attached to said outboard surface of said web portion, said ornamental panel member having a first surface and an oppositely disposed second surface:

adhesive means selectively positioned between said ornamental panel member and said outboard surface of said wheel, said adhesive means temporarily and permanently attaching said overlay directly to said outboard surface of said wheel;

a decorative layer adhered to said first surface of said ornamental panel member;

said ornamental panel member being a thin panel of substantially uniform thickness; and

means for temporarily and permanently securing and positioning said ornamental panel member on said wheel, said securing and positioning means attached to said ornamental panel member and engaging said

outboard surface for causing said ornamental panel member to be centrally mounted with respect to said rim portion of said wheel and spaced from said outboard surface of said wheel so as to define at least one gap therebetween;

whereby when said ornamental panel member is directly attached to said outboard surface of said wheel by said adhesive means said decorative layer of said first surface substantially covers said outboard surface of said wheel.

'213 patent, col.'s 13-18.

a. Claim 1

[16] The "providing" step of this claim teaches "a means, interposed said outboard surface of said wheel and said overlay, for temporarily securing said overlay to said outboard surface of said wheel and for positively positioning said overlay on said outboard surface of said wheel." '213 patent, col. 13, lines 46-50. Defendants believe that this "interposed" means is limited in scope to the five "intermediate positive fixing" structures described in the specification: a hot melt adhesive, a snap tab, a threaded fastener, a palnut and post, and double-sided adhesive tape. '213 patent, col.'s 7-9. Lacks implicitly suggests, however, that the "interposed" means language encompasses anything that exists between the cladding and the outboard surface of the wheel-particularly defendants' snap-lock mechanism-and that performs a securing and positioning function.

35 U.S.C. s. 112, para. 6 governs my construction of the "interposed" means element because it is in means-plus-function form throughout the claim and does not recite sufficient structural limitations. *See Al- Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318 (Fed.Cir.1999). Under section 112, paragraph 6, a means-plus-function element is to be construed "to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. s. 112, para. 6; *see also* *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1570-71 (Fed.Cir.1997). Accordingly, a person of ordinary skill in the art would interpret the "interposed" means of claim 1 to cover the five intermediate positive fixing structures described in the specification *and* their equivalents.

An equivalent to the "interposed" means of claim 1 must be "temporary" (meaning it cannot be relied on to permanently secure the cladding to the wheel face during the service life of the wheel), "intermediate" (meaning it must be some structure or material between the cladding and the wheel face), and for the purpose of temporarily securing and positioning the cladding to the outboard surface of the wheel so that 1) the cladding is centrally located with respect to the rim, 2) the cladding is spaced from the outboard surface leaving at least one gap between them, and 3) the permanently securing adhesive can cure. Furthermore, as the language of claim 1 and the specification make clear, the "interposed" means of claim 1 is to be distinguished from the curable adhesive used to permanently secure the cladding to the wheel face. This distinction between a temporary securing element (the specification's intermediate fixing structures and their equivalents) and a permanent securing element (the curable adhesive) is present in dependent claims 3 and 8, but is not present in claims 25 and 40.

b. Claim 3

This claim, which depends from claim 1 and therefore incorporates all of claim 1's limitations, further specifies that the curable adhesive of claim 1 is an air-curable adhesive and that this air-curable adhesive must fill "a limited portion" of the gap between the cladding and the wheel face "so as to provide a quantity

of air trapped between" the cladding and the wheel. '213 patent, col. 14, lines 9-14. Claim 3's terms are not disputed.

c. Claim 8

This claim also depends from claim 1. It teaches the use of a fastener as the "interposed" temporary securing and positioning means. Thus claim 8 is not governed by section 112, paragraph 6 because the ordinary meaning of "fastener" describes sufficient structure. *Webster's* defines a "fastener" as "a device (as a button, hook and eye, zipper, or snap) that joins together separate parts or closes an opening (as on a garment)." Three of the specification's recommended "intermediate positive fixing" structures are representative of what one of ordinary skill in the art could understand the temporary "fastener" to be: the snap tab, the threaded fastener, and the palnut and post.

d. Claim 25

This independent claim teaches a method for selectively depositing the curable adhesive between the cladding and the wheel in such a way as to seal out dirt and moisture and permanently secure the cladding to the wheel face. Claim 25 does not have the "interposed" temporary securing and positioning means at issue in claims 1, 3, and 8. Even though it is a key infringement claim, claim 25's terms are not disputed.

e. Claim 40

This is the final independent claim of the '213 patent. It teaches a cladded composite wheel apparatus that has both a "means for temporarily *and* permanently securing and positioning said ornamental panel member on said wheel" and an "adhesive means selectively positioned between said ornamental panel member and said outboard surface of said wheel, said adhesive means temporarily and permanently attaching said overlay." '213 patent, col. 18, lines 38-55. Thus unlike claims 1, 3, and 8, claim 40 teaches an apparatus assembled by the use of *two* permanent means: one the securing means and one the adhesive means.

35 U.S.C. s. 112, para. 6 governs my construction of claim 40's securing means because it is in means-plus-function form and it does not recite sufficient structural limitations. *See Al- Site*, 174 F.3d at 1318. This presents a dilemma, however, because there is no corresponding structure in the specification as required by section 112, paragraph 6. Nowhere does the specification discuss a cladded wheel built with a permanent securing means and a permanent adhesive. All structures described in the specification use a temporary securing means in combination with a permanent adhesive.

The apparent lack of a corresponding structure to the permanent securing means implicates validity issues and bars me from arriving at a *Markman* construction for this claim. I am unable to address the validity issues at this time, however, because the parties did not treat the construction of claim 40's permanent securing means under section 112, paragraph 6. Accordingly, the parties are to submit supplemental briefs within two weeks of the filing date of this opinion in which they address 1) the proper construction of claim 40 and 2) how their proposed construction relates to claim 40's literal infringement and validity issues. A separate opinion on claim 40 will then issue.

B. Literal Infringement

Some infringement arguments are now moot in light of my claim construction. I address only those that survive.

1. The '809 Patent

[17] From Joint Exhibit 42, which is an engineering diagram labeled Hayes Manufacturing Drawing No. D-12447031 ("the Hayes Drawing" or "the Drawing"), and the deposition testimony of two of defendants' employees, FN11 Lacks argues that defendants' process for assembling their cladded wheel literally infringes claim 1 of the '809 patent because that process performs every element or step of the claim 1 method. In response, defendants do not argue that the Drawing inaccurately represents, or does not represent, their accused process. FN12 Rather, defendants contend that their accused process does not literally infringe claim 1 because it does not perform the following two steps: the "forming" step, which requires, among other things, that the cladding panel be "shaped to cover said entire wheel face outer surface and not cover said axial peripheral lip," and the "positioning" step, which requires, among other things, that the cladding panel be "substantially flush with adjacent portions of said wheel face outer surface."

FN11. Lacks relies specifically on the deposition testimony of Hayes' Product Director, Thomas Heck, and Jeff Beam, who oversaw the development of defendants' own cladded wheel patent (the '370 patent). (*See* Pl.'s Br. for First Cross-Mot. for Partial Summ. J. at 13-14.)

FN12. Indeed, it is clear from the arguments of both parties that they are in implicit accord on the fact that the Hayes Drawing represents defendants' accused process accurately. (*See, e.g.*, Pl.'s Br. for First Cross-Mot. for Partial Summ. J. at 13-16; Defs.' Br. for First Joint Mot. for Partial Summ. J. at 13-14.)

Regarding their "forming" step argument, defendants contend that the cladding panel they use covers a substantial portion of the axial peripheral lip. Defendants therefore conclude that they do not have an assembly process that follows the teaching of the "not cover" limitation found in claim 1. My review of the Hayes Drawing confirms that defendants' cladding panel covers almost the whole inner side of the structure claim 1 would describe as the axial peripheral lip. (*See* Joint Ex. 42.) Once placed on the wheel face, defendants' panel extends over the inner shoulder of the rim lip and terminates just shy of the tip of the lip. (*See id.*) By covering the axial peripheral lip, even if only partially, defendants assemble their cladded wheel by a process that lacks the "forming" step of the claim 1 method.

I therefore conclude that defendants do not literally infringe claim 1 of the '809 patent because their accused process does not perform every step or element of claim 1's method. FN13 *See* Becton, 922 F.2d at 796. A summary judgment of literal noninfringement in favor of defendants with respect to claim 1 is appropriate because the parties' infringement dispute over the "not cover said axial peripheral lip" limitation does not present a factual debate, but rather a question of law regarding the proper construction of claim language. Having resolved that question, and having determined that no genuine issue of material fact exists as to the location of defendants' panel on its assembled wheel, I find that defendants have shown they are entitled to a judgment as a matter of law. *See* Fed.R.Civ.P. 56(c).

FN13. This conclusion makes it unnecessary for me to also address whether defendants perform the "positioning" step.

My holding on claim 1 necessitates an identical holding with respect to claim 2 of the '809 patent. As a

dependent claim to claim 1, claim 2 incorporates the "forming" step and thus the "not cover" limitation into its scope. Accordingly, defendants' assembly process cannot literally infringe claim 2 because it does not perform the "forming" step. A summary judgment of literal noninfringement in favor of defendants with respect to claim 2 is therefore appropriate.

2. The '906 Patent

Plaintiff has accused the cladded wheel depicted in the Hayes Drawing of literally infringing claims 1, 11, 16 of the '906 patent, while defendants have moved for a summary judgment of noninfringement with respect to all of the remaining claims—claims 1, 2, 4-6, 8, 9, 11, 12, and 14-16. Defendants argue once again that their accused product cannot literally infringe because the cladding panel partially covers the axial peripheral lip. All of the remaining claims of the '906 patent teach the "not cover said axial peripheral lip" limitation discussed above. I have construed that limitation, as used in the '906 patent, to have the same meaning given it in the '809 patent.

Given, then, that the claim construction and the facts are the same for both patents, my holding with respect to claims 1 and 2 of the '809 patent must also apply to the remaining claims of the '906 patent. Summary judgment of literal noninfringement in favor of defendants with respect to claims 1, 2, 4-6, 8, 9, 11, 12, and 14-16 of the '906 patent is therefore appropriate.

3. The '213 Patent

a. Claims 1, 3, and 8

[18] Defendants generally argue that their accused product does not literally infringe claims 1, 3, and 8 because its snap-lock mechanism is not a temporary securing and positioning means. Defendants specifically contend that the snap-lock mechanism is not 1) temporary or 2) interposed—both key limitations on the scope of the securing and positioning means. Lacks argues, however, that while the snap-lock mechanism may be a permanent way of attaching the cladding to the wheel face, it nevertheless initially serves the positioning functions claimed for the securing and positioning means. Lacks also argues that even though the snap-lock mechanism is simply the edge of the cladding panel itself, and thus is not something separate from the panel, it is still interposed or between the cladding and the wheel face.

Lacks' snap-lock arguments with respect to the "temporary" limitation are flawed. The literal infringement question raised by defendants' argument is whether the snap-lock mechanism is an equivalent of the five temporary fixing structures described in the specification. The answer must be no. It is a core mantra of the specification that the fixing structures (and thus their equivalents) are only temporary in nature. As it explains, "an element for temporarily securing and positioning the overlay 16 on the wheel 10 is a material, element or device that, by itself, would not be expected to reliably secure the overlay 16 to the outboard surface of the wheel 10 during the normal useful life of the wheel 10." '213 patent, col. 8, lines 16-21. The specification in fact claims advantages from this temporary quality—it avoids redundancy (the curable adhesive of claims 1, 3, and 8 already acts as the permanent securing means) and unnecessary costs. '213 patent, col. 13, lines 6-7.

Under the specification's own definition, defendants' snap-lock mechanism is not a temporary fixing structure. Defendants create the snap-lock by first machining a circumscribing groove into the inner side of the wheel's rim flange. The edge of the cladding panel then snaps into that groove when the panel is pushed onto the wheel face. (See Joint Ex. 42.) Beam, who helped develop the snap-lock, testified that defendants

arrived at this mechanical solution in part because fatigue tests demonstrated that an adhesive would not permanently secure the cladding to the wheel. (*See* Beam Dep. at 49-55.) And Heck, who also helped develop the snap-lock, testified that defendants "found that something as an adhesive really was not necessary" and that the snap-lock was so effective at attaching the cladding without adhesive that "you virtually destroy the cladding trying to get it back off." (Heck Dep. at 86.)

Lacks has offered no evidence that the snap-lock is not a permanent structure for securing the cladding to the wheel face. Thus Lacks, the nonmovant, has failed to provide specific facts to counter the prima facie noninfringement evidence offered by defendants. *See* Fed.R.Civ.P. 56(e). Summary judgment of literal noninfringement in favor of defendants on claims 1, 3, and 8 of the '213 patent is therefore appropriate because defendants' accused product lacks the required *temporary* securing and positioning means.FN14

FN14. In light of this holding, it is unnecessary for me to address defendants' "interposed" argument. It is further unnecessary for me to address defendants' prosecution history estoppel argument with respect to the '213 patent because the issue of infringement under the doctrine of equivalents is not before me on these motions. *See* *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 862 (Fed.Cir.1991).

b. Claim 25

[19] The only literal infringement dispute under claim 25 is whether the adhesive used by defendants in their accused product "permanently" secures the cladding to the wheel as required by the claim. Otherwise, it is clear from the Hayes Drawing and the testimony of defendants' employees that the adhesive in defendants' accused product is selectively deposited to leave air voids between the cladding and the wheel and to seal out dirt and moisture.

Defendants initially assert that their alleged adhesive is no adhesive at all but instead only a sealant. The evidence contradicts them. The Hayes Drawing identifies the alleged adhesive as an "ADHESIVE (FUSOR 380/382)." (*See* Joint Ex. 42.) Beam testified that the alleged adhesive has multiple functions, including adherence of the cladding to the wheel. (*See* Beam Dep. at 53-54.) And Heck testified that the automotive industry considers the substance to be an epoxy adhesive. (*See* Heck Dep. at 86.) Defendants have offered no evidence that shows the alleged adhesive is not an adhesive.

Having established that defendants' glue is really a glue, the question then becomes whether it permanently secures the cladding to the wheel as required by claim 25. According to the specification of the '213 patent, for an adhesive to permanently secure it must "withstand the forces and impacts necessary to permanently mount the overlay 116 on the wheel 110." '213 patent, col. 8, lines 64-66. Lacks has submitted no evidence that the defendants' adhesive satisfies this definition of permanence. Lacks instead seems to be relying only on an inference: since the alleged adhesive is an adhesive, it must therefore by implication permanently secure the cladding to the wheel.

Yet Beam's testimony about the adhesive's failure to permanently secure the cladding during fatigue tests counters this inference. Defendants' decision to pursue the snap-lock mechanism after these tests also rebuts the inference. A jury could reasonably conclude from these facts that defendants' adhesive is not able to permanently secure the cladding as required by claim 25. Lacks has therefore failed to show that there is no genuine issue of material fact as to the literal infringement of claim 25's "permanently secure" limitation. Summary judgment in favor of Lacks' motion on claim 25 of the '213 patent is therefore not appropriate.

IV. Validity

[20] Federal statute requires that "[e]ach claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims." 35 U.S.C. s. 282. "The presumption of validity under 35 U.S.C. s. 282 carries with it a presumption that the examiner did his duty and knew what claims he was allowing." *Intervet*, 887 F.2d at 1054. In raising their validity challenges, defendants have the burden of showing invalidity of each claim by clear and convincing evidence. *See North American Vaccine*, 7 F.3d at 1579.

A. The '809 Patent

Defendants contend that the asserted claims of the '809 patent are invalid because the patent fails to satisfy the written description requirement, the asserted claims are indefinite, the asserted claims are anticipated by the prior art, and the asserted claims are obvious in light of the prior art. I treat each of these grounds for invalidity in turn.

1. Written Description

[21] [22] According to 35 U.S.C. s. 112, para. 1, the specification of a patent application must contain:

a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.

Whether a specification at the time of filing complies with the written description requirement of section 112, paragraph 1 is a question of fact. *See Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed.Cir.1991). To satisfy the written description requirement, the specification, at the time of its filing, "must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012 (Fed.Cir.1989). An applicant complies with this test "by describing *the invention*, with all its claimed limitations." *Lockwood*, 107 F.3d at 1572 (emphasis in original).

[23] Defendants first argue that the written description of the '809 patent application discloses only a plastic cladding panel and thus does not support the final version of the claim language, which does not limit the type of cladding panel material to be used.FN15 For this argument, defendants rely on *Gentry Gallery, Inc. v. Berklinc Corp.*, 134 F.3d 1473 (Fed.Cir.1998), in which the Federal Circuit held that "claims may be no broader than the supporting disclosure" and "a narrow disclosure will limit claim breadth." *Id.* at 1480. In so holding, the court emphasized that the inventor in *Gentry* had made it clear in his disclosure, and in his testimony, that he considered the limitation missing from the later-drafted claim language "to be an essential element of his invention," if not the essence of the invention itself. *Id.* at 1479.

FN15. Defendants have incorrectly titled this argument in their brief as a failure to provide an enabling disclosure as required by 35 U.S.C. s. 112, para. 1, even though in the text of their brief defendants discuss only the standard and substance of the written description requirement of the same statutory paragraph. The Federal Circuit has held that the enabling disclosure requirement and the written description requirement are "separate and distinct." *Vas-Cath*, 935 F.2d at 1563. I therefore treat defendants' argument regarding the plastic panel disclosure as a validity challenge based on the written description requirement.

One further point: In making their written description argument, defendants have suggested that I take into consideration the fact that Lacks eliminated the plastic panel limitation from its claims late in the prosecution of the '809 patent application in a "transparent effort to ensnare" defendants' accused product, which uses metal, not plastic, cladding panels. (Defs.' Sixth Joint Mot. for Partial Summ. J. at 5.) I decline to consider this fact in light of the Federal Circuit's decision in *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1482 (Fed.Cir.1998) (noting that amending claims during prosecution with the intent to cover a competitor's product is permissible).

Lacks contends that *Gentry* does not apply here because a plastic panel limitation is simply not an essential element of the cladded wheel invention described by the claims of the '809 patent. While Lacks essentially agrees that the written description of the original '809 patent application recommends a plastic panel as the preferred embodiment, Lacks points out that the same description states that the panel taught by the '809 patent need only "be formed from a suitable material which is both heat and impact resistant, and which can permanently adhere a metal plating." (Pl.'s Br. in Opposition to Defs.' Sixth Joint Mot. for Partial Summ. J., Ex. 2 at 10.) Lacks also notes that the stated objectives of the original application disclose no limitation on the type of material to be used for the cladding panels. (*See id.* at 9-10.)

[24] I find from this evidence that a genuine issue of material fact exists as to the validity of the written description with respect to the plastic panel disclosure. Taken in a light most favorable to Lacks, the written description of the '809 patent would allow a reasonable jury to conclude that Chase, the inventor of the '809 patent, did not consider a plastic panel to be an essential element of his invention at the time he filed the application. Such a conclusion would avoid invalidation under *Gentry*.

[25] Defendants also argue that the claims of the '809 patent fail to satisfy the written description requirement because the specification of the original application uses figures that depict only cast or drop center wheels, while the claim language could cover all wheel types. I also reject this argument. Defendants can point to no language in the written description that even suggests that the disclosure is limited to cast or drop center wheels. Indeed, defendants simply have no evidence that suggests that Chase considered those two wheel types to be essential elements of the '809 patent. While it is clear that the preferred embodiment teaches the use of cast and drop center wheels, Lacks can nevertheless point to specific passages in which the description also encompasses any type of automotive wheel. (*See Pl.'s Br. in Opposition to Defs.' Sixth Joint Mot. for Partial Summ. J. at 5-6.*) Viewed in a light most favorable to Lacks, then, the evidence demonstrates that defendants are not entitled to a summary judgment of invalidity with respect to the type of wheel disclosed by the written description of the '809 patent application.

2. Indefiniteness

[26] [27] [28] Defendants argue that certain phrases shared by claims 1 and 2 of the '809 patent violate the definiteness requirement of 35 U.S.C. s. 112, para. 2, thereby invalidating those claims. Section 112, paragraph two states that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." An allegation of indefiniteness "requires an analysis of whether those persons skilled in the art would understand the bounds of the claim when read in light of the specification." *Credle v. Bond*, 25 F.3d 1566, 1576 (Fed.Cir.1994). "If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, section 112 demands no more." *Id.* An indefiniteness challenge presents a question of law. *Id.* I must, when possible, interpret claims "so as to preserve their validity." *Modine Mfg. Co. v. U.S. Intern. Trade Com'n*, 75 F.3d 1545, 1557 (Fed.Cir.1996).

a. "axial peripheral lip"

[29] Defendants allege that the phrase "axial peripheral lip" is indefinite because it is a unique phrase that Lacks failed to define in the specification of the '809 patent. In support, defendants observe that the complete phrase is not mentioned in the specification. Defendants also offer evidence indicating that the phrase is not standard nomenclature amongst engineers in the automotive industry; instead, the phrase "rim flange" is the generally accepted term for describing the rim lip. (*See* Defs.' First Mot. Partial Summ. J., Ex. G.)

Defendants' arguments fail because my claim construction has illustrated that a definition of "axial peripheral lip" exists in the '809 patent. Taken together, the claim language and the specification provide reasonably clear guidance to one of ordinary skill in the art of cladded wheels as to the meaning of the disputed phrase. Satisfying section 112 is not difficult here because of the simple and straightforward subject matter-cladded wheels-of the '809 patent. *See* *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed.Cir.1993) ("The degree of precision necessary for adequate claims is a function of the nature of the subject matter"). Thus it would not pose an unreasonable leap for a person of ordinary skill to read the claim language and understand its limitations, read the specification and see the substantively identical "peripheral lip" reference in the diagrams, and then determine that the phrase "axial peripheral lip" referred to what is well known in the art as the rim flange.

Defendants essentially ask me to invalidate claims 1 and 2 simply because the drafter of the '809 patent omitted the adjective "axial" from the specification. Here, the simple subject matter of the invention, the explicit and implicit limitations in the claim language, and the text and diagrams of the specification more than compensate for the omission. I therefore conclude that defendants have failed to show by clear and convincing evidence that claims 1 and 2 of the '809 patent are invalid for indefiniteness with respect to the phrase "axial peripheral lip."

b. "entire wheel face outer surface"

Defendants argue that this phrase is indefinite because the specification of the '809 patent conflicts with it. Defendants find support for this argument where the specification states that the preferred embodiment of the cladding panel is formed so as to provide a "smooth transition" from the overlay to the "outboard surface of the wheel disk. " '809 patent, col. 7, lines 22-29. Defendants argue that this passage suggests that the panel need not cover the entire wheel face outer surface in order to be within the claimed invention's scope.

Defendants' argument confuses the validity issues of indefiniteness and enablement. The former focuses on the precision and definiteness of the claim language in light of its subject matter, while the latter examines the adequacy of the specification's disclosure of the claimed invention. *See* *Personalized Media v. Int'l Trade Comm'n*, 161 F.3d 696, 706 (Fed.Cir.1998). By asserting a conflict between the specification's disclosure and the breadth of the reasonably clear "entire wheel face outer surface" claim limitation, defendants implicate the enablement requirement of section 112, paragraph 1 and not the definiteness requirement of section 112, paragraph 2. *See id.*

Accordingly, I will not consider defendants' argument under section 112, paragraph 2. I also refuse to consider it under section 112, paragraph 1 because the parties have not briefed the dispute here as an enablement issue.

c. "substantially flush with adjacent portions"

Defendants' indefiniteness concerns with respect to this phrase and its relationship with the "readily blends" limitation have been resolved by my claim construction, *supra*, in Part III.A.1.d. Given the reasons stated there and because of the simple subject matter of the '809 patent, I do not find the phrase so imprecise or unclear as to violate section 112, paragraph 2.

3. Anticipation

[30] [31] "Under 35 U.S.C. s. 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim." *Gechter v. Davidson*, 116 F.3d 1454, 1457 (Fed.Cir.1997). "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed.Cir.1991). Anticipation is a question of fact. *See Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed.Cir.1995). Thus "[f]or summary determination to be proper, there must be no genuine dispute whether the limitations of the claimed invention are disclosed, either explicitly or inherently, by an allegedly anticipating prior art reference." *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 1476 (Fed.Cir.1997).

Defendants assert that U.S. Patent No. 4,530,542 issued July 23, 1985 to M.A. Spiegel, et al. ("the Spiegel patent" or "Spiegel") anticipates claims 1 and 2 of Lacks' '809 patent. Spiegel teaches a cladded wheel center for a two-piece wheel FN16:

FN16. The two parts of such a wheel are the wheel center and the rim. A cast wheel is all one piece.

A chrome plated, thin, steel cover is applied over and attached to the wheel center with this cover conforming to and covering the entire outboard unfinished surface of the wheel center. A rim is connected to the wheel center for accommodating a tire. The chromed cover gives the wheel the appearance of having a chromed, non-ferrous wheel center.

...[T]he cover extends from an axle hub hole in the center of the wheel center to or closely adjacent the tire supporting rim.

An air gap is preferably provided between the outer periphery of the covered wheel center and the wheel rim.

Spiegel, col. 1, lines 62-68, and col. 2, lines 5-10. Spiegel teaches that the cladding panel or "cover 16 may be secured to the wheel center 32 by adhesive." Spiegel, col. 4, lines 51-52. Spiegel explains that its "invention provides a composite wheel of unitary construction which has the appearance of having a chromed non-ferrous wheel center and, due to the cover in effect forming a skin over the wheel center, feels and sounds like a solid, chromed, non-ferrous wheel center." Spiegel, col. 5, lines 10-15.

[32] Lacks contends that Spiegel does not anticipate because it lacks the '809 patent's essential requirement that its cladding panel cover the "entire wheel face outer surface." I agree. The panel of the '809 patent covers the exposed surfaces of the web and rim portions of the wheel face-the "entire wheel face outer surface"-and thus extends to the inner shoulder of the axial peripheral lip. Spiegel limits its cladding panel to covering only what would be the web portion of the '809 patent. Spiegel therefore does not disclose every limitation of the inventions claimed in claims 1 and 2 of the '809 and cannot, as a matter of law, anticipate those inventions.

4. Obviousness

[33] [34] [35] According to 35 U.S.C. s. 103, prior art invalidates a patent for obviousness when the "subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains." *See, e.g., Richardson-Vicks, Inc. v. Upjohn Co.*, 122 F.3d 1476 (Fed.Cir.1997) (holding patent invalid for obviousness). An obviousness inquiry under section 103 ultimately presents a question of law. *See In re Donaldson Co., Inc.*, 16 F.3d 1189, 1192 (Fed.Cir.1994) (unanimous *en banc* decision). In answering that question, I must address four factual considerations: (1) what is the scope and content of the prior art; (2) what are the differences, if any, between the claims at issue and the prior art; (3) what would have been the level of ordinary skill in the prior art at the time of invention; and (4) are there any secondary considerations of non-obviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966).

The third factor can be quickly dispensed with. Only Lacks asserts what the ordinary skill of a hypothetical person would have been in the art of cladded wheels at the time of invention. Plaintiff's expert, James D. Varin, recommends "that a person of ordinary skill in the development and application of the automotive wheel cladding art at issue in this suit would be an individual with at least a college degree in engineering, at least several years of experience as an engineer in the automobile industry and at least some hands on experience in engineering materials and automotive engineering involving automotive wheels." (Pl.'s Mem. in Opposition to Defs.' Fourth and Fifth Mots. for Partial Summ. J. at Ex. 1, para. 4.) Defendants have registered no objection to Varin's standard. In the absence of any objection and upon my own review of the evidence, I adopt his standard.

[36] The first factor of the *Graham* test, the scope and content of the prior art, is likewise straightforward. Defendants contend that three references constitute relevant prior art to the '809 patent: the already discussed Spiegel patent, U.S. Patent No. 3,517,968 issued June 30, 1970 to F.R. Tully et al. ("the Tully patent" or "Tully"), and German Patent No. 2,813,412 issued October 4, 1979 to Porsche ("the Porsche patent" or "Porsche"). Relevant prior art consists of those references "reasonably pertinent to the particular problem with which the inventor was involved." *See In re GPAC, Inc.*, 57 F.3d 1573, 1577 (Fed.Cir.1995). Here, the particular problem of the '809 patent is how to permanently adhere a chrome-plated ornamental cladding to the entire outboard face of an automotive wheel in such a way that the wheel itself convincingly appears to be chrome-plated.

Lacks has suggested that the Spiegel and Tully patents are not relevant to the '809 patent because the Spiegel cladding covers only the web portion of the wheel and Tully teaches a trim ring that covers only the rim portion of the wheel. Lacks incorrectly applies the relevance test for prior art. Relevance does not require a reference to be identical in scope to the patent at issue, but that the reference address a problem reasonably pertinent to the one the inventor of the patent at issue pursued. *See id.* Under this definition, Spiegel and Tully are relevant prior art. Both concern themselves with the reasonably pertinent problem of adhering an overlay of some size, whether a center cover or a trim ring, to the wheel face for the aesthetic advantage of a chrome-plated (Spiegel), or polished stainless steel (Tully), appearance.

Lacks does not contest the relevance of the Porsche patent. My evaluation of the Porsche patent, which teaches a two-piece ornamental cover for a wheel's outer face, finds it to be relevant prior art to the '809 patent.

Having determined that Spiegel, Tully, and Porsche are relevant prior art, the question then becomes how they differ, if at all, from the inventions of claims 1 and 2 of the '809 patent. This is the second factor of the *Graham* test. As discussed above, Spiegel teaches a chrome-plated cladding that covers only the web portion, or center, of a two-piece wheel. Spiegel recommends a center-only cladding in order 1) to facilitate manufacture of the two-piece wheel, 2) to enable heat generated during braking to dissipate out of the air gap that exists between the outer edge of the wheel center and the inner edge of the rim, and 3) to avoid damage to the cladding from tire changes or curb scrapes. *See* Spiegel, col. 4, lines 26-50.

Lacks argues that these teachings would have discouraged a person of ordinary skill in the art from extending the cladding's coverage to include the rim portion of the wheel; in other words, Lacks believes Spiegel teaches away from the "entire wheel face outer surface" cladding claimed by the '809 patent. Defendants, on the other hand, contend that a person of ordinary skill seeking to clad the single, unbroken face of a cast wheel-instead of the face of a two-piece wheel with its visible structural division between the wheel center and the rim-would not regard Spiegel as teaching away from the invention of the '809 patent. Defendants further contend that the particular problem of covering the entire unbroken face of a cast wheel would have motivated one of ordinary skill to combine the teachings of Spiegel, Tully, and/or Porsche to make the cladding of the '809 patent.

[37] I find defendants' arguments superior. It is undisputed that Spiegel would have taught a person of ordinary skill at the time of the '809 patent's invention that automotive wheel cladding could be chrome-plated, could be formed to fit "substantially flush" with the underlying contours of the wheel face, and could be permanently secured by adhesive. These are the core aesthetic and attachment goals pursued by claims 1 and 2 of the '809 patent. Thus what Spiegel leaves unanswered is a simple and minor problem: how to extend the cladding to include the rim portion of the wheel face.

Two of the three reasons cited by Spiegel for limiting its cover to the wheel center-facilitating manufacture of the wheel and enabling heat to dissipate from the air gap-are peculiar to the unique structure of two-piece wheels and thus would have no relevance to the problem of cladding the face of a one-piece, cast wheel. Only one of Spiegel's teachings could therefore be said to teach away from the "entire wheel face outer surface" cladding of the '809 patent: the suggestion that not covering the rim portion's exposed surface would avoid damage to the cladding due to tire changes or curb scrapes.

Yet other relevant prior art-Tully and Porsche, in particular, but also prior art disclosed in the specification of the '809 patent-did not consider decorative cladding that covered the rim portion to suffer from this disadvantage. Indeed, they teach the aesthetic advantage of covering the rim portion. As a matter of law, those of ordinary skill in the art are presumed to be fully aware of all prior art reasonably pertinent to the problem approached by the inventor of the patent at issue. *See Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 313 (Fed.Cir.1985). Thus the individual of ordinary skill faced with the problem of cladding the "entire wheel face outer surface" of a cast wheel at the time of the '809 patent's invention would have been fully aware of not only Spiegel, with its solutions to the core aesthetic and attachment problems, but would also have known of Tully and Porsche with their teaching that covering the rim portion is aesthetically desirable, unproblematic, and, in fact, quite conventional.

In the face of this teaching, Spiegel's suggestion that covering the rim portion would avoid damage to the cladding would not have sufficed to discourage a person of ordinary skill from pursuing a solution to the problem of covering the whole wheel face of a cast wheel. Furthermore, as a matter of law, the very nature

of the simple problem faced by that person would have led him/her by necessity to look beyond the Spiegel patent for help. *See Pro-Mold & Tool Co. v. Great Lakes Plastics*, 75 F.3d 1568, 1573 (Fed.Cir.1996) (noting that a suggestion to combine prior art references may "come from the nature of the problem to be solved"). In searching for teachings on cladding the entire face of a cast wheel, a person of ordinary skill would naturally look beyond Spiegel, whose teachings are constrained by the problem of cladding a two-piece wheel. Tully and Porsche would then have provided that person with teachings that suggested that extending the cladding to include the rim portion was possible.

Lacks attempts to defeat this strong prima facie evidence of obviousness in the relevant prior art by arguing under the fourth factor of the *Graham* test that the evidence of secondary considerations creates a genuine issue of material fact. Lacks' evidence regarding long-felt need for its invention and the failure of others to address that need is at best ambiguous. Lacks' experts state that there has been a long-felt need for decades, but their conclusory observations contradict some evidence suggesting that widespread consumer desire for inexpensive, chrome-plated wheels first arose in the early 1990's-about the time of Chase's creation of his first prototype cladded wheel. As to the failure of others to address that need, it is interesting to note that defendant McKechnie applied for a full face, cladded wheel patent, the Beam patent, almost two years before Lacks filed for the '809 patent.

Lacks also contends that the commercial success of their cladded wheel product, as well as that of the defendants' accused product, establishes non-obviousness despite defendants' strong prima facie evidence to the contrary. Because I have determined that defendants' accused product does not literally infringe the '809 patent, however, Lacks cannot rely on defendants' sales to demonstrate commercial success of its product. Furthermore, even though I do not doubt that Lacks has achieved commercial success with some sort of cladded wheel product, it has not fulfilled its burden of proof of demonstrating a factual nexus between that commercial success and the actual invention claimed in the '809 patent. *See Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed.Cir.1988). "Such a nexus is required to prove that the commercial success is not ascribable to other irrelevant commercial and economic factors." *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 719 (Fed.Cir.1991).

Having failed to prove a prima facie case of commercial success, and having offered only conclusory and ambiguous conclusions regarding long-felt need and the failure of others, Lacks has not overcome defendants' clear and convincing prima facie evidence of obviousness with respect to the claims of the '809 patent. Lacks has also failed to demonstrate that a genuine issue of material fact exists as to defendants' evidence of obviousness. Accordingly, I hold that the subject matter of claims 1 and 2 of the '809 patent would have been obvious to one of ordinary skill in the art of cladded wheels at the time of their invention.

B. The '906 Patent

The validity issues raised by defendants against the asserted claims of the '906 patent are the same as those for claims 1 and 2 of the '809 patent. Throughout this case, the parties have for all purposes treated the '809 and '906 patents (and their claims) as identical. As explained above, this stance is justified. Therefore, my validity holdings for the two are the same. The result: claims 1, 2, 4-6, 8, 9, 11, 12, and 14-16 of the '906 patent are invalid because they would have been obvious to one of ordinary skill in the art of cladded wheels at the time of their invention.

C. The '213 Patent

Defendants contend that the asserted claims of the '213 patent are invalid because the patent fails to satisfy

the written description requirement, the patent does not disclose the inventor's best mode for carrying out his invention, the inventions of the asserted claims were on sale more than a year before the filing of the patent application, the inventions of the asserted claims were publicly used and/or offered for sale by defendants more than a year before the filing of the patent application, and the asserted claims are anticipated and/or made obvious by prior art.

1. Written Description

As they did with the '809 and '906 patents, defendants argue that the '213 patent's original specification violates the written description requirement of section 112, paragraph 1 because it discloses only a plastic cladding panel and thus does not support the claim language, which does not limit the type of cladding panel material to be used.

This argument once again fails. The evidence defendants rely on for this argument against the '213 patent is even weaker than it was with respect to the '809 and '906 patents. Unlike the claim language of the '809 and '906 patents, the claim language of the '213 patent never claimed a plastic cladding panel as an element of its invention. All defendants can point to is the specification's observation that plastic is the preferred material for the cladding panel, *see* '213 patent, col. 3, lines 41-45, and that the preferred embodiment has a plastic panel, *see* '213 patent, col. 6, lines 1-3. Defendants have no evidence, either from the stated objectives of the specification or from the inventor, Lee Chase, that proves that he thought a plastic panel was an essential element of his invention. *See* Gentry, 134 F.3d at 1479 (finding such evidence particularly persuasive in determining validity under the written description requirement).

Thus, in the end, what little evidence defendants do have against the '213 patent fails to establish that Chase intended for his claimed invention to be limited exclusively to the use of plastic cladding panels. To state a preference for plastic is not to say that other materials may not be used or are not within the scope of the invention. Indeed, a preference implies only that plastic is better, but not that it is the only suitable material.

Accordingly, defendants have failed to show that there is no genuine issue of material fact with respect to the validity of the written description of the '213 patent. *See* Fed.R.Civ.P. 56(c). Summary judgment in favor of defendants on this issue is therefore not appropriate.

2. Best Mode

[38] The patent statute requires a patent specification to " set forth the best mode contemplated by the inventor of carrying out his invention." 35 U.S.C. s. 112, para. 1. My determination of whether the specification of the '213 patent satisfies this best mode requirement involves two factual inquiries. *See* Fonar Corp. v. General Elec. Co., 107 F.3d 1543, 1548 (Fed.Cir.1997). First, I must determine whether at the time Chase filed the application for the '213 patent, he had a best mode of practicing the invention. *See id.* Second, if Chase did have a best mode, I must then determine whether the best mode was disclosed in sufficient detail to allow one skilled in the art to practice it. *See id.* The first inquiry is "wholly subjective," while the second is "largely an objective inquiry." U.S. Gypsum Co. v. National Gypsum Co., 74 F.3d 1209, 1212 (Fed.Cir.1996).

As to the first inquiry, defendants argue that Chase did have a best mode for practicing the invention of the '213 invention because they believe he selected one adhesive, a GE silicone adhesive, as the best adhesive for permanently securing the cladding to the wheel. Lacks argues, however, that Chase did not believe that the GE adhesive was the best, but instead believed that it was one of several silicone adhesives that would

work well with his claimed invention.

[39] Viewing the evidence in a light most favorable to Lacks, I find that a genuine issue of fact exists as to whether Chase had determined that the GE silicone adhesive was superior to all others. Defendants' best mode argument relies on two excerpts from Chase's deposition testimony. The first:

Q. As of June of '95, did you know of an adhesive that would work at that point or that worked best for purposes of adhering the ornamental panel to the wheel?

A. Yeah, I would think so. We would have felt at that time that we knew, you know-at that point in time we would have felt that we knew what was working.

(Chase Dep. at 377.) And the second:

Q. Now, the '213 patent talks about silicone and polyurethane adhesives. What polyurethane adhesives were you familiar with as of June of 1995?

A. I can't recall the names of them, but there was a number that we screened. They were pretty common.

Q. Any that were acceptable?

A. There were some that were probably acceptable based on our knowledge at the time, but they weren't as good.

Q. They weren't as good as the GE one we were talking about a few minutes ago?

A. Right.

(*Id.* at 377-78.)

With all reasonable inferences drawn in favor of Lacks, these excerpts do not constitute clear and convincing evidence that Chase selected the GE silicone adhesive as the best adhesive. First of all, in neither excerpt does he state that it is the best. Second, the confusing disjunctive structure of the first excerpt's question limits the usefulness of Chase's answer, leaving one able to conclude only that he had probably determined that some unidentified adhesive worked with his invention-not necessarily that it, or the GE adhesive, were the best. Finally, the second excerpt demonstrates only that Chase believed the GE silicone adhesive to be superior to the polyurethane adhesives he tested, but does not demonstrate that he believed it to be superior to any silicone adhesives.

An earlier excerpt of testimony that defendants do not quote substantiates this last point.

Q. As of that point in time [October 15, 1993], the GE adhesive was the one that you felt worked -

A. Yes. We may have felt others were working, also, but for some reason picked GE.

Q. Was it this one that is referred to in the 3200?

A. It probably was. Actually, Dow probably had three or four and GE probably had three or four that at that point in time we felt would have worked fine.

Q. Were they both silicone adhesives?

A. Yes.

(Chase Dep. at 372.)

Accordingly, the most that can be inferred against Lacks is that Chase had determined by the time he filed the '213 patent application that the GE silicone adhesive worked better than the polyurethane adhesives, but not significantly better than other satisfactory silicone adhesives, and that while he chose the GE adhesive over those silicone adhesives, he does not remember doing so for any performance-related reason. These inferences are not altered by Chase's affidavit. Thus it is possible that a reasonable jury could conclude that Chase did not have a best mode for the adhesive used in the '213 patent. Summary judgment in favor of defendants on the best mode issue is therefore inappropriate. In light of my holding, it is unnecessary for me to address the second factual inquiry of the best mode requirement.

3. On-Sale Bar

[40] 35 U.S.C. s. 102(b) provides that no person is entitled to patent an invention that has been "on sale" more than one year before the filing of its patent application. In *Pfaff v. Wells Electronics Inc.*, 525 U.S. 55, 119 S.Ct. 304, 142 L.Ed.2d 261 (1998), the Supreme Court has recently determined that section 102(b)'s on-sale bar applies when two conditions occur before the critical date:

First, the product must be the subject of a commercial offer for sale. An inventor can both understand and control the timing of the first commercial marketing of his invention. The experimental use doctrine, for example, has not generated concerns about indefiniteness, and we perceive no reason why unmanageable uncertainty should attend a rule that measures the application of the on-sale bar of Section 102(b) against the date when an invention is first marketed commercially....

Second, the invention must be ready for patenting. That condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

Id. at 311-312 (footnotes omitted). An on-sale bar question presents me with "a question of law based on underlying issues of fact." *Weatherchem Corp. v. J.L. Clark, Inc.*, 163 F.3d 1326, 1332 (Fed.Cir.1998) (applying *Pfaff* test). Lacks filed its application for the '213 patent on June 6, 1995, and so the critical date here is June 6, 1994.

While the parties have treated defendants' on-sale challenge as against the entire '213 patent itself, it is more accurately understood as against the separate inventions of the patent's remaining asserted claims—claims 1, 3, 8, 11-13, 20-22, 24, and 25. *See Ortho Pharmaceutical Corp. v. Smith*, 959 F.2d 936, 942 (Fed.Cir.1992) (noting that the "validity of each claim must be evaluated individually as provided in 35 U.S.C. s. 282"). Since defendants did not submit any prima facie validity evidence specific to the particular inventions of claims 3, 12, 13, 20-22, and 24, summary judgment is not appropriate for those claims.

As to claims 1, 8, 11, and 25, the evidence shows that their inventions were ready to be patented as of May 1992. At that time, Chase had conceived of a cladded wheel that 1) had a temporary securing means in the form of a mechanical fastener (the key element of claims 1 and 8) and/or 2) used a selective application of the permanently securing adhesive (the key element of claims 11 and 25). (*See* Chase 9/30/98 Aff. at para. 6; *see also* Chase Dep. at 57-62.) Thus the second prong of the *Pfaff* test is satisfied.

I turn then to the first prong of *Pfaff*: the commercial offer of sale. The Supreme Court held in *Pfaff* that a commercial offer of sale occurs "when an invention that is ready for patenting is first marketed commercially." 119 S.Ct. at 311-12. Defendants essentially argue that the first commercial marketing of the inventions of claims 1, 8, 11, and 25 occurred when Lacks occasionally showed mock-up cladded wheels to customers (both wheel manufacturers and the Big Three automakers themselves) during a period that began in March 1992 and continued into 1993. Lacks argues that these mock-up showings-of what it calls its CHROMTEC wheel-were held only to gauge whether there was sufficient interest among potential customers to justify further development.

[41] I must first ascertain whether the mock-ups shown to potential customers during that period embodied the inventions of claims 1, 8, 11, and 25. *See Pfaff*, 119 S.Ct. at 311-12. Chase's testimony establishes that the first CHROMTEC mock-ups, developed in March of 1992, did not have a temporary securing means as required by claims 1 and 8 and may not have used the selective application of the adhesive as specifically taught by claims 11 and 25. (*See* Chase Dep. at 62-64.) Defendants offer no evidence showing that later CHROMTEC mock-ups incorporated the temporary securing means. Defendants have therefore failed to present clear and convincing evidence that any of the potential customer contacts between March 1992 and the end of 1993 involved CHROMTEC mock-ups that embodied the inventions of claims 1 and 8. Indeed, all that the evidence establishes for that period is that some of the mock-ups shown to potential customers probably had a selective application of adhesive in the manner taught by claims 11 and/or 25.

Accordingly, defendants cannot assert that the inventions of claims 1 and 8 were on sale at any time from their conception in March of 1992 to the release of the CHROMTEC wheel to Lacks' sales and marketing staff on January 5, 1994. As for the CHROMTEC mock-ups of that period that did use a selective adhesive pattern, the question remains whether their showings constituted the first commercial marketing of the inventions of claims 11 and/or 25. I find that defendants have not offered clear and convincing evidence to that effect. Indeed, when viewed in a light most favorable to Lacks, the evidence would allow a reasonable jury to conclude that Lacks initiated its pre-January 1994 customer contacts merely because it desired potential customer input on, and their validation of, the ongoing development of its cladded wheel product.

[42] Defendants also argue that Chase's first release of the CHROMTEC wheel to Lacks' sales and marketing staff on January 5, 1994 constituted a commercial offer of sale six months before the critical date. The Federal Circuit has held, however, under nearly identical facts that distribution of an invention to a sales staff does not rise to the level of a commercial offer of sale. *See Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 828 (Fed.Cir.1991). Furthermore, defendants offered no evidence that Lacks' sales and marketing staff made any offers to sell, or any sales, between January 5, 1994 and June 6, 1994. The inference that such sales activity would be likely is also not clear and convincing evidence of a commercial offer of sale. *See id.*

I therefore hold that summary judgment in favor of defendants as to claims 1, 8, 11, and 25 is not appropriate on the on-sale bar issue.

4. Defendants' Public Use and/or Offer of Sale

Defendants contend that if I find their accused product to have infringed Lack's '213 patent, then it follows that the infringed claims must be found invalid because defendants publicly used and/or offered for sale, before the critical date of June 6, 1994, a cladded wheel product that was "essentially identical" to its accused product. (*See* Defs.' Third Joint Mot. Partial Summ. J. at 7.) Because I have determined, however, that defendants' accused product did not literally infringe claims 1, 3, and 8 of the '213 patent, defendants' public use/on-sale argument fails against those claims. Furthermore, because I have determined that there is a genuine issue of material fact as to whether the adhesive of defendants' accused product permanently secures the cladding to the wheel, and thus literally infringes claim 25 of the '213 patent, I find it premature at this time to address defendants' public use/on-sale argument with respect to claim 25. Finally, defendants' evidence and argument does not address separately the inventions of claims 11-13, 20-22, and 24 and so summary judgment is not appropriate for those claims.

5. Anticipation

[43] Defendants first argue that claims 1, 3, and 8 of the '213 patent are anticipated by the published German and Japanese counterparts to Lacks' '809 and '906 patents ("the foreign patents"), the Tully patent, or the Spiegel patent.FN17 I agree that the foreign patents anticipate claims 1, 3, and 8.

FN17. Claims 1, 3, and 8 belong to a group of claims in the '213 patent that teach various types of mechanical securing means in combination with the permanently securing adhesive. The other remaining claims in this group are claims 7, 9, 32, 35, 37, and 38. Defendants' anticipation motion, filed on September 14, 1998, addressed claims 7, 9, 32, 35, and 38 (in addition to claims 1, 3, and 8); however, defendants later provided a list of remaining patent claims at the October 30, 1998 hearing that did not list claims 7, 9, 32, 35, 37, or 38 as remaining claims in the case. In light of this later representation, and in order to avoid unnecessarily finding undisputed claims invalid, I will consider only claims 1, 3, and 8 of the mechanical securing means group to be at issue.

Lacks does not dispute that the foreign patents are prior art.FN18 Lacks also does not dispute that the foreign patents have specifications that are identical to the original application for the '809 and '906 patents. Lacks' only argument against a finding of anticipation is that the foreign patents do not teach a mechanical securing means that leaves a gap between the cladding and the wheel face that is partially filled by adhesive as required by claims 1, 3, and 8.

FN18. Even though the foreign patents were published more than one year before the filing of the application for the '213 patent, Lacks did not disclose the foreign patents to the patent examiner. Defendants argue that the foreign patents were material to the patentability of the '213 application and that Lacks therefore had a duty to disclose them to the examiner. Defendants contend that Lacks' failure to disclose the foreign patents as prior art must invalidate all remaining claims of the '213 patent.

Defendants are essentially making an inequitable conduct argument. They have not offered, however, prima facie evidence of Lacks' intent to mislead the patent examiner-a necessary element to the charge. *See* *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed.Cir.1995) ("The withholding of information must meet thresholds of both materiality and intent"). Defendants' argument therefore fails.

This argument is unpersuasive because it ignores the evidence. The '809/'906 specification teaches using a

boss and fastener "to locate the overlay 20 in the plane of the wheel disk 18 relative to the center of the wheel disk" so that "the overlay 20 can be accurately positioned on the wheel disk 18." '906 patent, col. 7, lines 36-42. Figures 4 and 5 of the specification show that this method of securing the cladding to the wheel face leaves a gap between the two structures. Figure 4 shows that gap partially filled with adhesive, while Figure 5 shows the gap unfilled.

Lacks argues that Figure 4 must be an illustrator's error because it believes a partially filled gap contradicts the '809/'906 specification. I find no evidence of contradiction, however; a partially filled gap surely comports with the specification's instruction to adhere the cladding directly to the wheel. Lacks also contends that the disclosure of the '809/'906 specification would not have been an enabling disclosure of the inventions of claims 1, 3, and 8 because the significance of the gap would not have been apparent to one of ordinary skill in the art. This argument too is unpersuasive. As a matter of law, all that a prior art reference need do to anticipate an invention is to identically disclose all limitations of the claimed invention. *See* 35 U.S.C. s. 102; *see also* Gechter, 116 F.3d at 1457. I find that the foreign patents are clear and convincing evidence of section 102 anticipation. Claims 1, 3, and 8 are therefore invalid. FN19

FN19. In light of my holding, I find it unnecessary to consider whether the Tully and Spiegel references also anticipate claims 1, 3, and 8.

[44] Defendants next argue that claims 11-13, 20-22, 24, and 25 of the '213 patent are anticipated by the foreign patents, Tully, or Spiegel. FN20 I find that the foreign patents and Spiegel do not anticipate these claims. These prior art references do not concern themselves explicitly or inherently with the adhesive's pattern. It is not an element of their inventions. I also find that Tully fails to anticipate because it teaches a trim ring, not an overlay that covers the wheel's center or disk face as required by the claims at issue.

FN20. Defendants' anticipation motion also addressed claim 39. Because it did not appear on defendants' subsequent list of remaining claims, and because it is one of the claims on which Lacks has conceded literal noninfringement, I will not address it here.

Accordingly, I hold that a summary judgment of section 102 invalidity is appropriate for claims 1, 3, and 8 of the '213 patent, but not for claims 11-13, 20-22, 24, and 25.

6. Obviousness

[45] The final validity question is whether the prior art already discussed-the foreign patents, the Tully patent, the Spiegel patent, and defendants' Beam patent-would have made the remaining claims of the '213 patent obvious to one of ordinary skill in the art of cladded wheels. Even though it is clear that none of these prior art references alone would have made the remaining claims obvious, defendants fail to address in even the briefest manner the motivations that might have led a person of ordinary skill in the art to realize the desirability of combining the teachings of some or all of the prior art. The issue of motivation must be resolved in every obviousness determination involving combinations. *See* Pro-Mold, 75 F.3d at 1573 ("It is well-established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead an inventor to combine those references").

Without any argument or evidence from defendants on motivation, I cannot engage in an obviousness analysis. Summary judgment in favor of defendants on the issue of obviousness is therefore not appropriate with respect to the remaining claims of the '213 patent.

Conclusion

For all of the foregoing reasons, defendants' first joint motion is **GRANTED** on the issue of literal noninfringement of the remaining claims of the '809 and '906 patents; defendants' second joint motion is **GRANTED** on the issue of literal noninfringement of claims 1, 3, 7-9, 32, 35, and 37-39 of the '213 patent and is **HELD IN ABEYANCE** as to claim 40; defendants' fourth joint motion is **GRANTED** on the issue of obviousness of the remaining claims of the '809 and '906 patents; and defendants' fifth joint motion is **GRANTED** on the issue of anticipation of claims 1, 3, and 8 of the '213 patent and **HELD IN ABEYANCE** as to claim 40.

The claims asserted by plaintiff's suit that survive the motions are claims 11-13, 20-22, 24, and 25 of the '213 patent. Claim 40 of the '213 patent will be treated in a separate opinion after I receive the parties' supplemental briefing.

IT IS SO ORDERED.

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