IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WISCONSIN

STI HOLDINGS, INC., f/k/a Stoughton Trailers, Inc.,

OPINION AND ORDER

v.

Plaintiff,

09-cv-570-slc

GREAT DANE LIMITED PARTNERSHIP, Defendant.

This patent infringement case is before the court on defendant Great Dane Limited Partnership's motion for summary judgment. Great Dane contends that the patents-in-suit, United States Patents Nos. 6,450,564 (the '564 patent) and 6,578,902 (the '902 patent), owned by plaintiff STI Holdings, Inc. ("Stoughton") are invalid on grounds of anticipation and obviousness. Generally speaking, the patents claim a "wall joint" comprised of two panels with offset plateaus connected by a splicer and a "cargo body" comprised of multiple pairs of connected panels. The specific questions before the court are: 1) whether the claims disclosing a "splicer comprised of "first and second splicer plates" are anticipated by the prior art; 2) whether the claims disclosing a wall joint constructed with panels made out of a composite material are an obvious combination of the prior art; and 3) whether the inclusion of a logistics slot on the splicer as disclosed in the '902 patent was obvious from the prior art.

As explained below, I am denying Great Dane's motion on the anticipation question and granting it with respect to both obviousness questions. Great Dane's primary anticipation argument, that Worth '052 anticipates the splicer disclosed in the patents-in-suit, is contrary to a plain reading of the prior art, which clearly discloses a splicer comprised of a plate and a post,

not two plates. Great Dane waived its secondary argument because it did not raise it until the reply brief.

As for Great Dane's claim that it was obvious to use an offset joint in a composite panel, I find that even when construing the facts in the light most favorable to Stoughton, no rational trier of fact could find that merely substituting composite panels for the metal panels disclosed in the prior art was anything other than an incremental, predictable improvement lacking sufficient inventiveness to merit patent protection. Equally obvious was the inclusion of a logistics slot on the splicer, an improvement that was well-known in the prior art and would have been well within the grasp of a skilled artisan in the field. Finally, none of Stoughton's arguments concerning "secondary" considerations are sufficient to show that the challenged claims are nonobvious.

From the parties' proposed findings, I find the following facts to be undisputed for the purposes of deciding this motion:

FACTS

I. The Parties

Plaintiff STI Holdings, Inc., f/k/a Stoughton Trailers, Inc., is a Wisconsin corporation with its principal place of business located at 416 South Academy Street in Stoughton, Wisconsin. Defendant Great Dane is a Delaware limited partnership with its principal place of business located at 222 N. LaSalle Street, Chicago, Illinois. Stoughton and Great Dane are competitors in the trailer manufacturing industry. Stoughton claims to own United States Patent No. 6,450,564 (the '564 patent) which has a filing date of August 7, 2000, and United States Patent No. 6,578,902 (the '902 patent), which has a filing date of May 1, 2002.

II. Background of the Invention

The invention of the patents-in-suit relates generally to devices and configurations for joining panels, and more particularly to devices and configurations for joining consecutive sidewall panels of a trailer or container. Trailers and containers are similar but distinct: both are walled cargo boxes, but that's where a container stops, while a trailer's box is attached to a chassis with wheels and is pulled behind tractors. The invention disclosed in the patents-in-suit can be employed in a cargo container or any other box-type structure used to carry freight, "whether permanently or removably secured with respect to a vehicle and whether having dedicated wheels or not." '564 Patent, Col. 3, lines 56-60; '902 patent, Col. 4, lines 25-29.

Until relatively recently, most van-type semi-trailers, like those manufactured by the parties, were assembled using what is known as sheet and post construction. Sheet and post trailers are constructed of sidewalls consisting of a thin metal outer skin (commonly aluminum) interior vertical posts and an inside liner, such as plywood.

In the 1980s, plate trailers were introduced. In "plate wall" construction, the panels are made of a thicker material than used in sheet and post construction, thereby eliminating the need for reinforcing posts, with the panels typically connected to each other by a plate or splicer. The first plate wall trailers were constructed of aluminum plates, making them durable but heavy and expensive. As a result, trailer manufacturers began to look for a way to make a trailer as durable as an aluminum plate trailer, but as light and low cost as a sheet and post trailer.

The optimal design for a trailer is one with a smooth, protrusion-free interior. Not only do rivets, plates or other materials protruding into the interior reduce valuable cargo space, but they can cause cargo to snag or catch as it is being loaded or unloaded. For this reason, many plate trailer designs call for "coining," or thinning, a portion of a panel, including panel edges, in order to create a recessed area in which to couch protruding rivets, splicer plates or overlapping panels.

One such design was patented in January 1999 by Rodney Ehrlich, Vice President of Engineering at Wabash National Corporation. United States Patent No. 5,860,693 (the '693 Patent) taught a method for joining composite panels, composed of a plastic core material sandwiched between a thin metal skin, to form the sidewall of a trailer. Ehrlich's method called for compressing the core between the skins so as to create a coined end section at least one end of each panel, with a logistics plate or "splicing member" sitting against the coined end section and secured by rivets to join the panel together. Wabash's successful development of a lightweight-yet-durable composite plate trailer spurred its competitors, including STI and Great Dane, to attempt to patent their own designs for a composite plate trailer.

III. The Invention

On September 17, 2002, United States Patent No. 6,450,564 was issued to Gerald Allen Sill for his invention titled "Wall Joint Configuration." According to the background described in the patent, the invention purported to address the limitations of Wabash's design and other prior art regarding panel joint configurations by eliminating the need to coin or compress edges of the trailer sidewall panels. '564 Patent, Col. 2, lines 34-37. To do this, Sill employed a "joggle," or offset, in each of two abutting panels to be joined, thereby creating in each panel a main plateau, a spliced plateau and a jogged portion between the main plateau and the spliced plateau, with the thickness of the panel remaining substantially constant throughout. '564 Patent, Col. 2, lines 45-52. By placing the spliced plateaus of each panel end-to-end, a recessed region was created in which to house a splicer plate and associated rivets, thereby reducing or eliminating protrusions into the interior of the trailer or container without having to coin or stamp the panel edges. '564 Patent, Col. 3, lines 2-19. The figure below illustrates one highly preferred embodiment:



According to the inventor, his design could be used to construct any "cargo body," which he defined as "the sidewalls of a trailer, cargo container, truck body, or other cargo carrying body." '564 Patent, Col. 1, lines 17-20; '902 Patent, Col. 1, lines 24-27. Describing the preferred embodiment, he wrote:

Sidewall panels 15, 16 preferably are formed of solid aluminum or constructed of a composite material having a plastic or epoxy core sheathed in a metal skin, but may be constructed of any of a number of other materials suitable for trailer sidewall panels, such as laminate panels, hollow-core panels, panels having a core filled with any desired material, panels made from steel or other metal, plastic, fiberglass, and the like.

'564 Patent, Col. 3, lines 61-67.

The '564 patent recites the following claims:

1. A wall joint comprising:

a first panel having a main plateau defining a first plane, a spliced plateau defining a second plane substantially parallel to and spaced-apart from the first plane, and a jogged portion interconnecting the main plateau and the spliced plateau, the spliced plateau and main plateau being substantially the same thickness;

a second panel having a main plateau lying generally in the first plane, a spliced plateau lying generally in the second plane, and a jogged portion interconnecting the main plateau and the spliced plateau, the spliced plateau and main plateau being substantially the same thickness; and

a splicer coupled to the spliced plateaus of both the first and second panels.

2. The joint of claim 1, wherein the spliced plateaus each have first and second opposing surfaces and the splicer comprises first and second splicer plates, the first splicer plate coupling the first surfaces of the spliced plateaus together and the second splicer plate coupling the second surfaces of the spliced plateaus together.

5. The joint of claim 1, wherein the splicer comprises a single plate of rigid material.

8. The joint of claim 1, wherein the first and second panels are composite panels having a first core material sandwiched between layers of a second material, different from the first core material.

9. The joint of claim 1, wherein the first and second panels are aluminum.

15. A cargo body, comprising:

a plurality of panels arranged in side-by-side relationship to define pairs of adjacent first and second panels;

a joint between each pair of adjacent first and second panels, each joint being at least partially defined by an edge of the first panel and an edge of the second panel adjacent to the first panel,

the first panel having a having a main plateau defining a first plane, a spliced plateau defining a second plane substantially parallel to and spaced apart from the first plane, and a jogged portion interconnecting the main plateau and the spliced

plateau, the spliced plateau and main plateau being substantially the same thickness;

a second panel having a main plateau lying generally in the first plane, a spliced plateau lying generally in the second plane, and a jogged portion interconnecting the main plateau and the spliced plateau, the spliced plateau and main plateau being substantially the same thickness; and

a splicer coupled to the spliced plateaus of each pair of adjacent first and second panels.

16. The cargo body of claim 15, wherein the spliced plateaus of each pair of adjacent first and second panels have first and second opposing surfaces and each splicer comprises first and second splicer plates, the first splicer plate coupling the first surfaces of the spliced plateaus together and the second splicer plate coupling the second surfaces of the spliced plateaus together.

19. The cargo body of claim 15, wherein the splicer comprises a single plate of rigid material.

22. The cargo body of claim 15, wherein the panels are composite panels each having a first core material sandwiched between layers of a second material different from the first core material.

23. The cargo body of claim 15, wherein the panels are aluminum.

The '902 patent is a continuation of the '564 patent. It contains claims identical to the asserted claims of the '564 patent but for the addition of "the splicer having at least one logistics slot therein." The logistics slot functions to "secure or stabilize cargo within a trailer or container" by providing a place where ropes, cords, cables and similar elements can be connected to the sidewall. '902 patent, Col. 3, lines 37-41.

During prosecution of the application that led to the '902 patent, the Examiner rejected all pending claims under the judicially-created doctrine of obviousness-type double patenting. In the Examiner's view, the claims were obvious in light of the '564 patent and Yurgevich '099, which disclosed cargo vehicles and containers made of aluminum or composite plate materials and contained openings for receiving logistics. Rather than contest obviousness, the applicant limited voluntarily the term of the later-issued patent by submitting a Terminal Disclaimer.

Stoughton filed this lawsuit on September 17, 2009, alleging that Great Dane was infringing the '564 and '902 patents by utilizing a similar joint design on its composite trailers. On June 11, 2010, this court issued an order construing a number of terms used in the patents-in-suit. *See* dkt. 39.

IV. Prior Art References

A. <u>Worth '052</u>

United States patent No. 1,224, 052 to Worth, *Car Construction*, was published on April 24, 1917. Worth '052 relates to metal freight cars. One object of Worth '052 was "to provide a smooth surface on the inner side of the car body," which was accomplished in part by employing an offset, or "joggle" joint design. Worth '052, col. 1, lines 11-13.

Worth '052 discloses a freight car composed of a series of offset plates having diagonal ribs, with the plates connected by a flanged sheet metal "post 6" on one side and a "tie plate 14" on the other. Worth '052, lines 40-45. Worth described his posts as being "made of sheet metal plates, bent to form heads, webs and flanges." Worth '052, lines 17-19. Figure 8 from the '052 patent illustrates Worth's joint configuration:



Figure 6 from the patent depicts Worth's post:



Worth '052 was not considered by the Examiner during prosecution of the two patents-in-suit.

B. <u>Abott '279</u>

United States Patent No. 4,940,279 to Abott, *Cargo Vehicle Wall Construction*, was published on July 10, 1990. Abott '279 relates to thin-wall, van-type semi-trailers and similar cargo vehicles "employing a multiplicity of thin composite panels having improved strength to weight ratios over prior art materials." Abott '279 at col. 1, lines 6-10. The patent describes prior art plate wall trailers made of aluminum plate side walls, identifying their disadvantages in terms of size and weight. Abott '279 at col. 1, lines 12-30. In the Detailed Description of the Invention, the inventor describes a typical plate wall trailer made of composite panels. Abott

^{(279, col. 2, lines 19-20.} The patent describes wall joints for joining composite panels. Abott ⁽²⁷⁹ at Figs. 3, 4 and 5 and at col. 2, line 38 to col. 3, line 6.

Abott '279 was considered by the Examiner during prosecution of both patents-in-suit.

C. Yurgevich '099

United States Patent No. 5,112,099 to Yurgevich, *Plate Trailer Joints*, was published on May 12, 1992. Yurgevich '099 generally relates to "van-type semi-trailers and similar cargo vehicles and containers constructed of a plurality of rectangular panels composed of thin aluminum plate or composite materials." Yurgevich '099. col. 1, lines 12-15. The invention utilizes a "joining member" comprised of a rectilinear strip and other elements to join adjacent pairs of panels on a plate trailer. Yurgevich '099, col. 1, lines 59-67.

Yurgevich '099 describes "a plurality of openings 98 in the inner rectilinear strip 82 which were adapted to receive various logistics fittings." Yurgevich '099 at col. 5, lines 1-2. It also describes an alternative embodiment for a joining member incorporating a logistics fitting at col. 5, lines 13-26.

Yurgevich '099 was considered by the Examiner during prosecution of the '902 patent-insuit.

D. <u>Sitter '527</u>

United States Patent No. 5, 584,527 to Sitter, *Lightweight Trailer with Integral Plate Seams*, was published on December 17, 1996. Sitter '527 relates generally to plate-type semi-trailers and similar cargo-carrying bodies. It employs "[m]ultiple rectangular panels having a generally

corrugated design" which "provides sufficient columnar strength for the trailer such that vertical support posts are not required." Sitter '527, Abstract. The metal plates "are joined using a flexible adhesive seal and special gauging clips within a seam extrusion member." Sitter '527, col. 1, lines 7-10. According to the Background of the Invention, the design was an improvement over sheet and post construction because it was lighter, stronger and allowed for more cargo capacity, and was an improvement over plate trailers because it was stronger, easier to manufacture and less susceptible to water leakage because the joining mechanism did not requiring boring. Sitter '527, Col. 1, lines 15-67.

Sitter '527 was not considered by the Examiner during prosecution of the two patents-insuit.

E. Ehrlich '693

As noted above, United States Patent No. 5,860,693 to Ehrlich, *Composite Joint Configuration*, was published on January 19, 1999. Ehrlich '693 describes wall joint configurations and relates to joined composite panels for trailer bodies. The '693 patent discloses a composite plate joint in Figures 2 through 4 where the inside joint surface was coined to provide a recess for the connection plate. Ehrlich '693 describes a logistics plate 152 that has a plurality of spaced openings or slots. '693 Patent, Col. 4, lines 33-36. The slots provide a means for which equipment can be engaged, by a clip, for example, to the trailer sidewall. '693 Patent, Col. 4, lines 36-38. The logistics plate is one of the elements used to join the coined end of the panels together. '693 patent, Col. 11, lines49-53. Ehrlich '693 was considered by the Examiner during prosecution of the two patents-in-suit.

OPINION

I. Legal Standard

Great Dane contends that both patents it is accused of infringing are invalid, either as anticipated or as obvious, and it seeks summary judgment on that basis. Summary judgment is appropriate when, drawing all justifiable inference in the non-movant's favor, there exists no genuine issue of material fact and the movant is entitled to judgment as a matter of law. *King Pharmaceuticals, Inc. V. Eon Labs, Inc.*, 616 F.3d 1267, 1273 (Fed. Cir. 2010). "A genuine issue of material fact arises only if sufficient evidence favoring the nonmoving party exists to permit a jury to return a verdict for that party." *Sides v. City of Champaign*, 496 F.3d 820, 826 (7th Cir. 2007).

been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See King Pharmaceuticals*, 616 F.3d at 1274.

As a result of this court's claims construction order and information adduced during discovery, Stoughton, while reserving its right to appeal the court's constructions, has conceded that the wall joint configuration disclosed in the independent claims—1 and 15 of the '564 patent and 1 and 16 of the '902 patent—were anticipated by the prior art, namely Worth '052, which relates to metal freight cars, and Sitter '527, which teaches a wall joint configuration for plate trailers.¹

Still disputed are additional design features claimed in the patents, namely the "splicer comprised of first and second plates" disclosed in dependent claims 2 and 16 of the '564 patent and dependent claims 2 and 17 of the '902 patent, the use of composite panels as disclosed in dependent claims 8 and 22 of the '564 patent and dependent claims 8 and 23 of the '902 patent, and the inclusion of logistics apertures in the splicer plate as disclosed in claims 1, 2, 8, 16, 17 and 23 of the '902 patent.²

II. '564 Patent

A. Anticipation: Claims 2 and 16

Great Dane contends that claims 2 and 16 of the '564 patent, which disclose a splicer comprised of first and second splicer plates, are invalid as anticipated by Worth '052. A patent

¹ In light of this concession, I have not addressed the parties' competing arguments in regard to the relevance of a third patent, Pulcrano '585.

² Because Stoughton no longer is asserting claims 5 and 9 of the '564 patent or claims 5 and 20 of the '902 patent, *see* Pltf.'s Br., dkt. 49, at 8, n.2, these claims also have dropped out of the summary judgment analysis.

is anticipated "if the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the U.S.." 35 U.S.C. § 102(b). To prove anticipation, Great Dane must show that "all aspects of the claimed invention were already described in a single reference." *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576-77 (Fed. Cir. 1991); *see also In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1300 (Fed. Cir. 2007) (invalidity counterclaims of both independent and dependent claims may rise and fall on failure to teach a single limitation). Generally, the facts relevant to this finding are the reference claimed to be prior art and evidence of what the reference would mean to persons of ordinary skill in the field of the invention. *Id.* The anticipation inquiry proceeds on a claim-by-claim basis. *Sinisar Corp. v. DirectTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008).

Great Dane argues that Worth's "post" correlates to the "first splicer plate" of the '564 patent. First, Great Dane argues that because the posts are made from sheet metal plates, they actually are plates. This argument is unpersuasive. When construing the terms of a patent, the language is given its ordinary meaning as it would be understood by one of ordinary skill in the relevant art, given its context and the other patent claims. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). Apart from language in the specification stating that the "posts" in the '052 patent were to be made "from sheet metal plates, bent to form heads, webs and flanges," '052 Patent, page 2, lines17-19, the patent describes the "posts" as "posts." It uses the term "plate," on the other hand, to describe either the large panels of the freight car, *e.g.*, '052 Patent, page 1, lines 32-33, 44-46, or the much smaller "plate 14" (referred to at line 73 as a "tie plate") that is used, in tandem with the post, as a means of connecting the panels. '052

Patent, page 1,lines 69-70. The drawings depict both the large panels and the smaller "plate 14" as relatively thin, relatively flat pieces. This is consistent with the dictionary definition of "plate" as "[a] smooth, often nearly flat, and relatively thin, piece of any material," *Webster's New International Dictionary* 63 (1957), or "A smooth, flat, relatively thin, rigid body of uniform thickness." *The American Heritage Dictionary of the English Language* 1344 (2000).

In contrast to the ordinary understanding of the term "plate," the posts employed by Worth in his design are not smooth, flat or thin, but rather have a"T" shape. True, they are formed *from* sheet metal plates, but that is irrelevant. As Stoughton points out, once a piece of plate metal is bent and shaped into something else, it no longer is a "plate," it has become that something else. Under no ordinary or commonsensical reading of the patent could Worth's post be construed as a "plate."

Taking a different tack, Great Dane next argues that the flanges of Worth's post, element **13**, form just such a flat plate and that the presence of the additional material such as head **11** and web sections **12** is permitted by the description of the "splicer" in the patents-in-suit. *See* Def. Reply, dkt. 58, at 11. Although this argument is not necessarily incorrect, I do not address it because Great Dane did not raise it in its opening brief, nor was such an opinion expressed by its expert witness. As a result, Great Dane has waived this argument at the summary judgment stage. *Bodenstab v. County of Cook*, 569 F.3d 651, 658 (7th Cir. 2009) (arguments not developed until reply brief are waived); *Optivus Technology, Inc., v. Ion Beam Applications, S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (same).

The upshot is that Great Dane is not entitled to summary judgment on the ground that Worth '052 anticipated claims 2 and 16 of the '564 patent.

B. Obviousness: Claims 8 and 22

1. Legal Standard

Dependent claims 8 and 22 claim the wall joint of claims 1 and 15 but add the limitation that the panels be constructed of composite materials. As noted above, Stoughton concedes that the wall joint was anticipated by prior art. Great Dane contends that because the use of composite materials to form cargo body sidewalls also was well known in the prior art, this added design feature is unpatentable and therefore invalid under the doctrine of obviousness.

A court may invalidate a patent for obviousness "if the differences between 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 said subject matter pertains." 35 U.S.C. § 103(a). "Determining obviousness requires considering whether two or more pieces of prior art could be combined, or a single piece of prior art could be modified, to produce the claimed invention." Comaper Corp. v. Antec, Inc., 596 F.3d 1343, 1351-52 (Fed. Cir. 2010) (emphasis added). In making this inquiry, the court is not limited to prior art that contains a specific teaching to solve the particular problem at issue. To the contrary, "[c]ommon sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." KSR International Company v. Teleflex Inc., 550 U.S. 398, 420 (2007). The question is not whether a designer writing on a blank slate would have combined the teachings of the prior art, but whether a person of ordinary skill in the art would have seen a benefit to combining one known invention with another. *Id.* at 424. When evaluating a claimed invention for obviousness under 35 U.S.C. § 103, it is not

enough that all of the elements claimed were "old" in other contexts; "what must be found obvious to defeat the patent is the claimed combination." *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1448 (Fed. Cir. 1984).

Although "obviousness" is a question of law, certain facts are relevant to the analysis, including: (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the pertinent art. KSR, 550 U.S. at 406 (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)); PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1359-60 (Fed. Cir. 2007). "[W]hile an analysis of obviousness always depends on evidence that supports the required *Graham* factual findings, it also may include recourse to logic, judgment, and common sense available to the person of ordinary skill that do not necessarily require explication in any reference or expert opinion." Perfect Web Technologies, Inc. v. InfoUSA, Inc., 587 F.3d 1324, 1329 (Fed. Cir. 2009). In addition, "secondary considerations [such] as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." KSR, 550 U.S. at 406. "Where . . . the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors, summary judgment is appropriate." Id. at 427.

2. The Graham Analysis

The parties agree that in this case, a person with the relevant level of skill in the art would be someone with a degree in mechanical engineering and at least five years' experience designing and constructing trailers. The parties also agree that at least two prior art references not before the patent examiner, Sitter '527, a patent for a corrugated panel trailer, and Worth '052, a design for a sheet and post trailer, are similar in all elements to claims 8 and 22 of the '564 patent, except that neither Sitter nor Worth employed panels constructed of a composite material. Finally, there is no dispute that the prior art, namely Ehrlich '693, Yurgevich '099 and Abott '279, taught that composite panels had advantages over aluminum panels and could be used to form cargo body sidewalls. The question, then, is whether it would have been obvious to one of ordinary skill in the art to use the offset or "double joggle" arrangement taught by the '052 and '527 patents to join panels made from composite materials.

I begin with Stoughton's contention that the scope of the relevant prior art is limited to art related to composite plate trailers, which would exclude Worth '052 and Sitter '527. Stoughton supports this contention with the opinion of its expert witness, Francis Smidler, who has testified that the '052 patent "would never have been considered when developing a composite plate joint." Smidler Report, dkt. 53, exh. 1, at 15. According to Smidler, the '052 patent shows a way to construct walls "that would be too thick, too heavy and too expensive when in fact the design criteria for a Composite Plate trailer and the composite joints was to produce a thin wall, lighter weight and less expensive trailer." *Id.* As for the '527 patent, which discloses a corrugated panel trailer, Smidler cites to that patent's teaching that the corrugations themselves "provide sufficient columnar strength for the trailer such that vertical support posts are not required," as evidence that one skilled in the art would not consult that patent when designing a composite plate trailer. *Id.*, at 14. Smidler also observes that neither the '052 patent

nor the '527 patent "lead[s] to a smooth interior," which was a key design feature of the patentsin-suit.

Smidler is a skilled artisan in the relevant field: he is an engineer with more than 30 years' experience researching, designing, testing and manufacturing semi-trailers, and he was a member of the design team that developed and patented Wabash's design for a composite plate trailer. Even so, Great Dane argues that this court should disregard his opinion regarding the scope of the prior art because it is completely inconsistent with the specification of the patents-in-suit. *See, e.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) ("The claims, specification, and file history, rather than extrinsic evidence, constitute the public record of the patentee's claim, a record on which the public is entitled to rely ... Allowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make this right meaningless.").

Great Dane is correct. Contrary to Smidler's assertions, the patents-in-suit do not claim a "composite plate trailer" but rather a method of joining panels to construct a cargo body, which the inventor defined as "the sidewalls of a trailer, cargo container, truck body, or other cargo carrying body." Further, although the inventor stated a preference for composite panels, he specified that any number of different materials could be used, including laminate, hollowcore, panels having a core filled with any desired material, panels made from steel or other metal, plastic, fiberglass, "and the like." The inventor specified a cargo body that could be constructed from a number of materials *other than* composite, *see* '564 patent, Col. 3, lines 60-67, and he specifically claimed a cargo body constructed of composite *or* aluminum panels.³ This trumps Smidler's and Stoughton's attempt to crimp the scope of the relevant prior art.

³ See Claims 8 and 9, 13 and 14, 22 and 23, 27 and 28, *supra* at 6-7.

Further, even if the inventor were focused on designing a better composite panel trailer, the scope of the relevant prior art encompasses "not only the field of the inventor's endeavor but also any analogous arts." *In re GPAC Inc.*, 57 F.3d 1573, 1577-78 (Fed. Cir. 1995). "A person of ordinary skill is also a person of ordinary creativity, not an automaton," *KSR*, 550 U.S. at 421, and s/he is expected to consult prior art references reasonably pertinent to the problem s/he is facing, even if the prior art is in a different field. Here, regardless whether Worth '052 or Sitter '527 used composite panels, they provided obvious examples of a joint configuration used to form a cargo body sidewall that did not require coining, the problem that the inventor of the patents-in-suit was attempting to solve. Because Smidler's testimony regarding the scope of the prior art is contrary to both *KSR* and common sense, it carries no weight.

The same goes for Smidler's testimony that the only relevant prior art is prior art that leads to a smooth-walled interior. As Great Dane points out, notwithstanding the inventor's extolment of smooth interior walls in the abstract and specification of the '564 patent, nowhere does the patent actually *claim* a smooth-walled interior or demand that the interior splice plate be flush with the inside walls of the panels. In fact, Smidler admitted that an interior splicer plate that had all of the elements of the plate claims but protruded into the interior of the cargo body still would infringe the patent. Again, although the inventor may have *intended* to design a joint that provided for a smooth-walled interior, what matters in an obviousness inquiry is "neither the particular motivation nor the avowed purpose of the patentee," but rather "the objective reach of the claim." *KSR.*, 550 U.S. at 419-420. Because the claims at issue reach even joint configurations that do *not* necessarily lead to a smooth-walled interior, Smidler's

testimony on this point is entitled to no weight.⁴ A patent must be interpreted "as written, not as the patentees wish they had written it." *Chef America Inc. v. Lamb Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004).

I turn, then, to the differences between the aluminum or metal panels used in the prior art and the composite panels disclosed in claims 8 and 22, which is the only design difference claimed that is not disclosed by the prior art. Great Dane says that the strongest evidence that the substitution of materials was not innovative was supplied by the inventor himself, who indicated both in the patent claims and in the specification that the materials used were of no consequence: composite or aluminum, it didn't matter. According to Great Dane, "[a]ny person having even a modicum of skill in cargo body design could have prepared a list of known materials for cargo body sidewalls." Def's Br., dkt. 45, at 19.

Stoughton responds that just because the '564 patent teaches a joint design that was appropriate for both aluminum and composite panels does not mean that this teaching was obvious from the prior art. In fact, argues Stoughton, because composite has properties different from aluminum or other metals, it was not obvious at all that an offset joint designed for a metal sidewall would work. In particular, asserts Stoughton, its engineers had to figure out how they could take a prefabricated composite panel–which is composed of a polypropylene or other plastic interior sandwiched between two thin steel skins–and bend it to form an offset joint without risking delaminating the steel skin from the plastic core.

⁴ So too with the other aluminum-versus-composite design "differences" argued by Smidler, including the relative thickness of the panels and the need to form a seal with the top rail of the trailer. Apart from specifying that the main and spliced plateaus be of substantially the same thickness, the '564 patent does not describe the width or thickness of the panels or make any claims related to the connection of the panels to the trailer's top rail. In fact, the patent does not disclose a "trailer" at all.

Fair enough. But just because it was technically challenging to form an offset in a composite panel, however, does not mean that it was inventive. In fact, the Supreme Court rejected a nearly similar argument 160 years ago in *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851). The patented invention in that case was clay or porcelain knobs connected to a shank and spindle in a particular way. Although knobs of wood or metal that connected with a shank and spindle in the same way disclosed in the patent were known before the invention, the patentee claimed that the novelty of his patent lay in the substitution of the clay knob in the place of the wood or metal knobs in the prior art. The Court explained why the mere substitution of materials in that case was not new:

Now it may very well be, that, by connecting the clay or porcelain knob with the metallic shank in this well-known mode, an article is produced better and cheaper than in the case of the metallic or wood knob; but this does not result from any new mechanical device or contrivance, but from the fact, that the material of which the knob is composed happens to be better adapted to the purpose for which it is made. The improvement consists in the superiority of the material, and which is not new, over that previously employed in making the knob.

But this, of itself, can never be the subject of a patent. No one will pretend that a machine, made, in whole or in part, of materials better adapted to the purpose for which it is used than the materials of which the old one is constructed, and for that reason better and cheaper, can be distinguished from the old one; or, in the sense of the patent law, can entitle the manufacturer to a patent.

The difference is formal, and destitute of ingenuity or invention. It may afford evidence of judgment and skill in the selection and adaptation of the materials in the manufacture of the instrument for the purposes intended, but nothing more.

Hotchkiss, 52 U.S. at 265-266.

In a more recent case addressing the substitution of materials, the Court of Appeals for the Federal Circuit found that the substitution of borosilicate glass for ordinary glass in a sexual device was an obvious change that vitiated the patentability of the invention. *Ritchie v. Vast Resources, Inc.*, 563 F.3d 1334, 1337 (Fed. Cir. 2009). Substitution of borosilicate glass for ordinary glass was "not a venture into the unknown" but a predictable result of routine experimentation that did not "involve sufficient inventiveness to merit patent protection." Id. at 1337. Whereas the patent might have survived an obviousness challenge if the patentee had changed the composition of borosilicate glass by adding or subtracting types or amounts of the various components, the plaintiffs' patent had not claimed any variant of off-the-shelf borosilicate glass, which was a standard product with well-known properties. *Id*.

As in *Hotchkiss* and *Ritchie*, the invention disclosed in claims 8 and 22 represents the application of a well-known device (the offset joint design) to a different but well-known material (composite) that was known to be better suited for the purposes intended (constructing a cargo body sidewall). As in *Hotchkiss* and *Ritchie*, the inventor used an off-the-shelf material in his device. As in *Hotchkiss* and *Ritchie*, the resulting improvement is not patentable. In particular, Stoughton has not suggested that using the "old" joint configuration to join composite panels gave rise to any additional advantages not taught by the prior art; to the contrary, the inventor indicated that the advantages of his design were the same no matter what material was used. Indeed, the inventor did not even purport to invent a "composite plate trailer joint," but merely a "wall joint configuration," which he taught could be used with panels of any number of materials. As Great Dane points out, it is not inventive to provide a list of materials from which to make the device and then tell the builder just to choose one.

The mere fact that there were "risks" involved with bending composite panels does not mean that it was "a venture into the unknown." Certainly, it would have been obvious to a person of ordinary skill in the art that composite was a good material from which to construct a cargo body and that others had been successful in manipulating the material, insofar as the prior art had coined or compressed panels made from composite. Stoughton makes no claim that the properties or composition of a composite panel were unknown: all that apparently was unknown was what would happen when a composite panel was bent. The properties and composition of a composite panel being known, a skilled artisan in the field would reasonably expect that, with routine experimentation, s/he could successfully form an offset in a composite panel. As the Court explained in *KSR*, 550 U.S. at 421:

> When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Stated differently, plaintiff's assertions show only "the work of the skillful mechanic, not of the inventor." *Hotchkiss*, 52 U.S. at 267.

Finally, even if there was something inventive about *how* to bend a prefabricated panel so as to create the main plateau, spliced plateau and jogged portion claimed in the patents, that invention is not taught in the patents-in-suit. The patents simply teach that the admittedly old joint configuration could be applied to a composite panel. They are silent as to what steps one must take successfully to bend or otherwise form an offset in a composite panel. *Accord Western Union Co. v. MoneyGram Payment Systems, Inc.*, _____F.3d ____, 2010 WL 4942124, at *8 (Fed. Cir. 2010) ("Although we have held that a finding of obviousness may not be proper where the prior

art merely provided a promising field for experimentation . . . the testimony that Western Union relies upon here relates only to the effort that its engineers invested in software implementation of its commercial system, not toward any inventive aspect claimed in the patents."). To the extent that Stoughton's engineers might have invented some new method to bend composite into a preferred joint configuration, neither the '564 nor the '902 patent teaches the public how to use it. Accordingly, Stoughton's vague contention regarding the amount of "research and testing" in which its engineers engaged in order to figure out how to bend the composite panels will not defeat Great Dane's obviousness challenge.

In sum, Stoughton has failed to introduce evidence that could lead a rational trier of fact to conclude that the invention disclosed in claims 8 and 22 were not obvious. It was a matter of common sense to combine the '052 or '527 patents with the prior art composite panels in order to arrive at the invention claimed in the '564 and '902 patents, and one of ordinary skill in the art would have had a reasonable expectation of success in doing so.

3. Objective Evidence of Nonobviousness

Before invalidating a patent on grounds of obviousness, the court must consider objective evidence of nonobviousness, if present. *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1333 (Fed. Cir. 2010). These objective, "secondary" indicia of nonobviousness include commercial success, copying, long felt-need and failure of others. Nevertheless, "a strong prima facie obviousness showing may stand even in the face of considerable evidence of secondary considerations." *Rothman v. Target Corp.*, 556 F.3d 1310, 1322 (Fed. Cir. 2009) (citation omitted). "For objective [evidence of secondary considerations] to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention." *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995).

a. Commercial success

As proof that its claimed invention enjoyed commercial success, Stoughton cites to Exhibit A from the declaration of Kenneth Wahlin, dkt. 56 (under seal), which indicates that Stoughton's composite trailers took up an increasing share of all of the trailers sold by Stoughton in the years after Sill obtained his patent for the joint configuration. As Great Dane points out, however, Stoughton's composite plate trailers are "narrow" products because they include many more features (wheels, suspension, *etc.*,) than the "wall joints" or "cargo bodies," claimed by the broad inventions at issue here. With so many additional trailer features unaccounted for, the purported evidence of commercial success of Stoughton's composite trailers does not establish the nexus required to render the claims non-obvious. *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (holding that proponent must offer proof "that the sales were a direct result of the unique characteristics of the claimed invention").

Further, it is impossible to evaluate the commercial success of Stoughton's composite trailers without market share information. The fact that composite trailers may constitute an increasing share of Stoughton's annual sales provides no indication whether these sales represented a substantial quantity in the market. Great Dane is correct that selling thousands of composite trailers is meaningless without some evidence concerning the market in which the trailers were sold.

b. Long-felt need/Failure of others

As evidence that there was a long-felt need for Stoughton's patented joint design, Stoughton relies on the opinion of Smidler. According to Smidler, there was a long-felt need in the trailer industry for a composite trailer to compete with Wabash's composite trailer, which utilized coining in its joint design. Smidler asserts that the patents-in-suit satisfied this need by inventing a novel alternative to coining the edges of composite trailers.

Great Dane rejoins with two claimed alternatives to Wabash's design that existed at the time of Sill's invention: Yurgevich '099 and Abott '279, neither of which called for coining of the composite panels. Stoughton argues that neither of these designs were satisfactory because neither avoided coining while "maintaining a smooth interior." Plt.'s Br. Opp., dkt. 49, at 23. But as noted earlier in this opinion, a smooth interior is not claimed in the patents-in-suit and a structure that does not have a smooth interior still can satisfy all of the limitations of the patents. Therefore, even if interior smoothness was attractive to trailer buyers, this cannot establish that the features of the patents-in-suit are responsible for meeting this need.

In any event, apart from Smidler's general assertion that Stoughton, Great Dane and other trailer manufacturers wanted to develop their own design for a composite plate trailer in order to compete with Wabash, Stoughton offers no objective evidence to show that the trailer industry had an unsolved *need* for the claimed invention. In particular, Stoughton offers no evidence of any limitations in the composite trailer prior art, nor does it claim that its customers were interested in a different joint design. The fact that Wabash's competitors may have been looking for their own, non-infringing alternative to Wabash's design does not alone constitute evidence of non-obviousness, because "design incentives and other market forces" can in fact prompt obvious variations of existing inventions. *KSR*, 550 U.S. at 417.

Finally, Stoughton has presented no evidence of actual, documented failures by others that would support an inference that Stoughton's patents demonstrate a "'new display of ingenuity beyond the compass of the routineer." Dickey-john Corp. v. Int'l Tapetronics Corp., 710 F.2d 329, 346 (7th Cir. 1983) (quoting Kirsch Mfg. Co. v. Gould Mersereau Co., 6 F.2d 793, 794 (2d Cir. 1925) (Hand, J.)). Stoughton has offered only Smidler's testimony that when Wabash patented its design for a joint configuration for its composite plate trailers, its engineers spent a "considerable amount of time" conceptualizing all the possible ways to join composite plates to form a trailer sidewall, yet never came up with a design similar to that claimed in the patentsin-suit. Smidler, however, has not testified that Wabash's engineers were seeking to solve the same problem as the inventor of the patents-in-suit, namely to join sidewall panels made from nearly any material without coining the panel edges. Absent evidence that Wabash's engineers were seeking to solve the same problem, it is difficult to conclude that they "failed" in their efforts. Even if the evidence supported such a conclusion, the fact that Wabash's engineers "failed for a time in finding the solution may be attributable to the simple fact that they failed to take advantage of the massive body of knowledge already in the public domain." Dickey-john Corp., 710 F.2d at 346.

In sum, Stoughton has failed to introduce evidence showing that the claimed inventions filled a long-felt but unsolved industry need.

c. Copying

Stoughton presents evidence that Great Dane's president became aware of Stoughton's composite plate trailer in 2002, and that, after considering a number of different joint designs that required coining, Great Dane ultimately opted to employ a design for its composite plate trailers using parallel plateaus like that disclosed in the patents-in-suit. According to Stoughton, the fact that Great Dane could not come up with its own non-infringing alternative to Wabash's design shows that the claimed invention is not obvious. This has some traction, but not a lot. Stoughton has not presented evidence showing that Great Dane attempted but failed to find a solution to the problem actually addressed by the patents-in-suit, namely to join panels of various materials to form a cargo body sidewall without coining, which is different from having attempted and failed to find a non-infringing alternative to Wabash's composite plate trailer. Indeed, Great Dane's copying of Stoughton's design might just as well have been a calculated business decision based on Great Dane's prediction that it could prove obviousness. At best, Stoughton's evidence of copying provides only weak evidence of nonobviousness. See Wyers v. Master Lock Co., 616 F.3d 1231, 1246 (Fed. Cir. 2010) ("Not every competing product that arguably falls within the scope of a patent is evidence of copying; otherwise, 'every infringement suit would automatically confirm the nonobviousness of the patent.") (quoting Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317, 1325 (Fed. Cir. 2004)).

In sum, although Stoughton has presented some objective evidence of nonobviousness, these secondary considerations do not overcome the strong showing of obviousness based on the first three *Graham* considerations. Therefore, there is no genuine issue of material fact and Great Dane is entitled to judgment as a matter of law that claims 8 and 22 of the '564 Patent are invalid for failure to satisfy the nonobviousness requirement of 35 U.S.C. § 103.

III. '902 Patent

The asserted claims of the '902 patent are identical to the asserted claims of the '564 patent but for the addition of "the splicer having at least one logistics slot therein." Again, Stoughton concedes that under this court's claim construction, every limitation of claim 1 and 16 of the '902 patent except a logistics aperture is found in Worth '052 and Sitter '527. Stoughton also admits that the use of logistics apertures or slots was a well-known element in a trailer sidewall, as taught by prior patents such as Ehrlich '693 or Yurgevich '099. Thus, the question is whether one of skill in the art would see the benefit of combining the teaching of Worth or Sitter with Ehrlich '693 or Yurgevich '099, both of which describe the use of a logistics aperture in a trailer with composite panels.

The answer is "yes." "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *KSR*, 350 U.S. at 417. The '693 and '099 patents both incorporated a logistics slot in the element used to join adjacent composite panels to provide a means for securing equipment to the trailer sidewall. Stoughton makes no suggestion that the logistics slot in its splicer plates function any differently from the logistics slot in the '693 or '099 patents, and no differences are claimed or described in the '902 patent. As in the '693 and '099, the function of the logistics slot in the '902 patent is to "secure or stabilize cargo within a trailer or container" by providing a place where ropes, cords, cables and similar elements can be connected to the sidewall. '902 patent, Col. 3, lines 37-41. As in the '693 and '099, the logistics slot disclosed in the '902 patent is located on the element used to join the panels together. In *KSR*, the Court considered the obviousness of a claim directed to an adjustable automobile throttle pedal combined with an electronic sensor. The relevant prior art included a patent that disclosed an adjustable pedal and another that disclosed an electronic sensor. According to the Court, there was "little difference between the teachings of [the relevant prior art] and the adjustable electronic pedal disclosed in [the claim]. A person having ordinary skill in the art could have combined [the adjustable pedal] with a pedal position sensor in a fashion encompassed by [the claim], and would have seen the benefits of doing so." *KSR*, 550 U.S. at 422.

Similarly, the splicer plate including at least one logistics slot claimed in the '902 patent represents a predictable application of a known technique to a piece of prior art ready for the improvement. The benefits of including the prior art's logistics slot with the wall joint configuration taught by Worth '052 and Sitter '092 would have been inescapably obvious to a person of ordinary skill in the art at the time of the invention of the wall joint configuration claimed in the '902 patent. In combination with each other, the wall joint configuration of Worth '052 and Sitter '527 performs exactly the function that it performs independent of the logistics slot, and the logistics slot performs exactly the function that it performs independent of the '052 and '527 patents. When, as here, "a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *KSR*, 550 U.S. at 417 (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976)).

Stoughton asserts that Great Dane has not met its burden of showing obviousness because it has failed to "explain exactly how one of skill in the art would have added a logistics aperture to any prior art joint." Plt.'s Br., dkt. 49, at 19-20. It is true that Great Dane's expert has offered mostly conclusory testimony in support of his opinion that incorporating a logistics slot into the joint design disclosed in the patents-in-suit was an obvious combination of wellknown elements. His conclusory pronouncements are entitled to no more weight than Smidler's conclusory pronouncements. However, an expert is not needed to explain something that is commonsensical and easily discernible by a non-expert. Further, Stoughton offers no evidence that adding a logistics aperture to the splicer was *not* predictable or *not* within the grasp of a person with ordinary skill in the art, probably because there isn't any.

The Patent Examiner reached this same conclusion, rejecting the claims of the '902 patent as being an obvious modification of the claims of the '564 patent in light of the '099 patent. The applicant did not contest this conclusion but instead filed a Terminal Disclaimer. Great Dane is incorrect when it asserts that the applicant's filing of a terminal disclaimer constitutes an admission of obviousness. *See Quad Environmental Technologies Corp. v. Union Sanitary Dist.*, 946 F.2d 870, 874 (Fed. Cir. 1991) (filing of terminal disclaimer serves statutory function of removing rejection of double patenting and raises neither presumption nor estoppel on merits of rejection). Even so, this prosecution history supports Great Dane's invalidity argument.

Stoughton nudges forward several arguments related to secondary considerations, such as commercial success, copying and long-felt need, but none is sufficient to defeat summary judgment on obviousness. Stoughton's arguments fail to show a nexus between the claimed invention (a "wall joint" or a "cargo body") and the purported secondary considerations, which all relate to a "composite plate trailer," *see, e.g., White v. Jeffrey Mining Machinery Co.*, 723 F.2d 1553, 1559 (Fed. Cir. 1983) (no nexus between commercial success employed by allegedly infringing mining machine and invention where machine included features not disclosed or claimed in patent). In any event, these arguments are legally insufficient to overcome Great Dane's strong prima facie showing of obviousness. *Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008) (objective evidence of nonobviousness insufficient where defendant made strong prima facie case of obviousness).

In sum, because the addition of a logistics slot to the wall joint configuration was merely a "predictable use of prior art elements according to their established functions," *KSR*, 550 U.S. at 417, the inclusion of this element was not inventive. Claims 1 and 16 of the '902 patent are obvious. In light of my conclusion above that the use of composite panels was also obvious, it follows that Claims 8 and 23 of the '902 patent are invalid as well.

ORDER

IT IS ORDERED THAT the motion of defendant Great Dane Limited Partnership for summary judgment on its affirmative defense of invalidity is:

(1) GRANTED with respect to claims 8 and 22 of the '564 patent and claims 1, 8, 16 and 23 of the '902 patent on the ground of obviousness, and

(2) DENIED with respect to claims 2 and 16 of the '564 patent and claims 2 and 17 of the '902 patent. These are the only claims that remain for trial on February 14, 2011.

Entered this 5th day of January, 2011.

BY THE COURT:

/s/

STEPHEN L. CROCKER Magistrate Judge