

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

Certain Connecting Devices (“Quick-Clamps”) for Use with Modular Compressed Air Conditioning Units, Including Filters, Regulators, and Lubricators (“FRL’s”) That Are Part of Larger Pneumatic Systems and the FRL Units They Connect

**Investigation No. 337-TA-587
(Remand)**

**FINAL INITIAL DETERMINATION
Administrative Law Judge Carl C. Charneski**

Pursuant to the Commission’s Order of October 1, 2009, this is the Final Initial Determination on Violation following remand from the Court of Appeals for the Federal Circuit. For the reasons stated herein, it is not found that any asserted claim of United States Patent No. 5,372,392 is invalid due to obviousness.

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I. Procedural History

By publication of a notice in the *Federal Register* on November 13, 2006, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation with respect to U.S. Patent No. 5,372,392 (“the ‘392 patent”) to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain devices for modular compressed air conditioning units and the FRL units they connect by reason of infringement of one or more of claims 1-9, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

71 Fed. Reg. 66193 (2006).

Norgren, Inc. of Littleton, Colorado (“Norgren”) was named as the complainant. The following companies were named as respondents: SMC Corporation of Tokyo, Japan; SMC Corporation of America of Indianapolis, Indiana; AIRTAC of Ningbo, China; and MFD Pneumatics of Chicago, Illinois. The Commission Investigative Staff (“Staff”) of the Commission’s Office of Unfair Import Investigations is also a party in this investigation. *Id.*

AIRTAC and MFD Pneumatics were terminated from the investigation on the basis of consent orders. *See* Order No. 7 (Initial Determination); Notice of Comm’n Decision Not to Review (July 13, 2007). Thus, SMC Corporation and SMC Corporation of America (collectively, “SMC”) are the only respondents remaining in the investigation.

An evidentiary hearing on the question of violation of section 337 commenced on November 27, 2007, and concluded on November 29, 2007. All parties, *i.e.*, Norgren, SMC and the Staff, were represented at the hearing.

On February 13, 2008, an Initial Determination (“ID”) issued finding no violation of

section 337. In particular, it was found that although a domestic industry did exist, and the asserted claims of the '392 patent had not been shown to be invalid due to obviousness (which had been alleged by SMC), Norgren had not established that the accused devices infringe any asserted claim of the '392 patent either literally, or under the doctrine of equivalents. *See* ID at 64.¹ On April 18, 2008, the Commission issued a notice that it determined not to review the ID, and terminated the investigation with a finding of no violation. 73 Fed. Reg. 21157 (2008).

Norgren appealed the Commission's final determination to the Court of Appeals for the Federal Circuit. On May 26, 2009, the Court issued a decision in which it changed the claim construction, reversed the Commission's determination of noninfringement, vacated the Commission's determination of nonobviousness, and remanded the case. The Court stated, "[we] believe, however, that the ALJ should evaluate obviousness in the first instance under the correct construction of 'generally rectangular ported flange' – i.e., a construction that does not require a flange having projections on all four sides." *Norgren, Inc. v. Int'l Trade Comm'n*, 2008-1415 ("*Norgren*"), 336 Fed. Appx. 991, slip op. at 8 (Fed. Cir. May 26, 2009). The Court issued its mandate on September 9, 2009.

On October 1, 2009, the Commission remanded the investigation to the Chief Administrative Law Judge for designation of a presiding ALJ to conduct proceedings consistent with the aforementioned judgment of the Federal Circuit, including issuance of a final initial determination on violation. Comm'n Order at 1 (Oct. 1, 2009).² On that date, the Chief

¹ Ultimately, Norgren asserted only claims 1-5, 7, and 9 of the '392 patent. ID at 14.

² The Commission provided that "[t]he final initial determination will be processed in accordance with Commission rules 210.42(a) and 210.43-.46. The ALJ may otherwise conduct (continued...)

Administrative Law Judge reassigned this investigation to the undersigned. Notice to the Parties (Oct. 1, 2009).

On April 21, 2010, following a period of discovery, a hearing was held, during which all parties were represented.³ The parties have filed briefs and replies, and the question of obviousness is ripe for determination.

II. General Law of Obviousness

One cannot be held liable for practicing an invalid patent claim. *Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). The claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by “clear and convincing” evidence of invalidity. *Checkpoint Sys., Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

The issue presented on remand is whether the asserted claims of the ‘392 patent are invalid due to obviousness. Obviousness is grounded in 35 U.S.C. § 103, which provides, *inter alia*, that:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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

²(...continued)

the remand proceedings as he deems appropriate, including reopening the record.” Comm’n Order at 2.

³ The Federal Circuit denied a Norgren “petition[] for a writ of mandamus directing the United States International Trade Commission to vacate its order scheduling a hearing on April 21, 2010.” *In re Norgren Inc.*, Misc. No. 923, Order (Fed. Cir. Jan. 6, 2010).

made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103(a).

An allegation of obviousness is evaluated under what are known as the *Graham* factors: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness, the so-called “secondary considerations,” *e.g.*, commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006).⁴

“One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419-20 (2007). “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.*

Specific teachings, suggestions, or motivations to combine prior art (often referred to as “TSM”) may provide helpful insights into the state of the art at the time of the alleged invention. *Id.* at 420. Nevertheless, “an obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of

⁴ “Before answering *Graham*’s ‘content’ inquiry, it must be known whether a patent or publication is in the prior art under 35 U.S.C. § 102 – a legal question.” *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

inventive pursuits and of modern technology counsels against limiting the analysis in this way.”

Id. “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* A “person of ordinary skill is also a person of ordinary creativity” *Id.* at 421.

The Federal Circuit has harmonized the *KSR* opinion with many prior circuit court opinions by holding that when a patent challenger contends that a patent is invalid for obviousness based on a combination of prior art references, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); *see KSR*, 550 U.S. at 416 (a combination of elements must do more than yield a predictable result; combining elements that work together in an unexpected and fruitful manner would not have been obvious). Further, “when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.”

The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

III. Discussion

A. Overview of the Patent and the Parties' Arguments

Claim 1 is the only independent claim of the '392 patent. *See* JX-1, col. 4, line 44 through col. 6, line 21 (all nine claims of the patent). During the underlying investigation, the dispute concerning alleged obviousness centered exclusively on claim 1. ID at 56-57. Similarly, in this remand proceeding, respondent SMC and complainant Norgren advance arguments only with respect to claim 1. The Staff alone addresses the additional limitations of the asserted dependent claims, albeit briefly and in support of its overall conclusion of patent invalidity. *See* Staff Br. at 13-15.⁵

In its corrected form, claim 1 provides as follows:

1. Connecting structure for contiguously connecting together a pair of fluid-flow elements, each fluid flow element including a generally rectangular ported flange so as to define a pair of ported flanges associated with the fluid-flow elements, said connecting structure comprising:

a four-sided, generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges, one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position,

sealing means for establishing fluid-tight communication between the respective ports formed in said flanges, and

locking means for releasably locking said one side in said

⁵ *See also* SMC Br. at 3-4 (observing that during the initial hearing in 2007, “Norgren did not argue validity based on the added limitations of dependent claims 2-5, 7 and 9” and that “[I]ikewise, at the remand hearing, Norgren did not attempt to argue or have its expert testify regarding validity based on any of the added limitations of these dependent claims.”).

operative clamping position, in which position the clamp urges the flanges towards one another thereby establishing together with said sealing means, said fluid-tight communication between said ports.

JX-1, col. 4, lines 44-66 (*see* Certificate of Correction).

The dispute both in the underlying investigation, and in this remand proceeding, focuses on the second element of the claim, particularly the limitation of “a four sided, generally rectangular clamp adapted . . . to engage . . . the pair of ported flanges,” and the limitation that refers to “one of said sides of the clamp being pivotally mounted.”

SMC argues that in the underlying investigation, the undersigned held that under the claim construction applied therein, there was not clear and convincing evidence of obviousness because none of the prior art relied upon by SMC disclosed a four-sided generally rectangular clamp adapted to engage a generally rectangular ported flange. SMC points out that in the ID, it was found that a particular prior art clamp, SMC’s old-style connector as exemplified in RPX-002, was adapted to engage mounting ears (*i.e.*, to engage on two sides instead of on four), rather than “a generally rectangular ported flange,” as that claim term was construed by the undersigned and later by the Commission. SMC Br. at 1-2 (quoting ID at 55-56).

While SMC’s characterization of the ID is correct as far as it goes, there were other grounds for the finding of nonobviousness, and they related to the “pivotally mounted” side limitation. ID at 56 (“Nor does the record explain how one of ordinary skill would have integrated a pivoting side into the clamp design.”).⁶

⁶ No party disputes the definition of one of ordinary skill in the relevant art that was used in the ID and adopted by the Commission, including the relevant time frame for making such an assessment. ID at 13 (“[O]ne of ordinary skill in the relevant art in 1993 would have had several years of industry experience working with FRLs and connectors, or would have had an

(continued...)

In any event, the Federal Circuit has since held that “[a]lthough it is possible for a four-sided, generally rectangular clamp to engage each generally rectangular flange on all four sides, nothing in the claims or the rest of the specification requires that every side contain a rim.” *Norgren*, slip. op. at 8. Consequently, SMC argues that under the Federal Circuit’s claim construction, the SMC old-style connector “is ‘a four-sided generally rectangular clamp that is adapted to engage a generally rectangular ported flange,’ and therefore, generally rectangular ported flanges *were* known in the prior art at the time of the invention. Thus, the stated basis for the ALJ not previously finding obviousness was negated by the Federal Circuit’s claim construction.” SMC Br. at 2 (emphasis in original).

SMC further argues that, under the Supreme Court’s *KSR* decision, the rationale underlying the presumption of patent validity is “much diminished” inasmuch as Norgren knew about the SMC old-style connector yet did not disclose it to the Patent and Trademark Office (“PTO”), which in turn did not consider it before issuing the ‘392 patent. *Id.* at 12-13 (citing *KSR*, 550 U.S. at 426). Indeed, SMC argues, “Federal Circuit law is to the same effect.” *Id.* at 13 (quoting *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984) (“Deference is due the Patent and Trademark Office decision to issue the patent with respect to evidence bearing on validity which it considered but no such deference is due with respect to evidence it did not consider.”)).

SMC also argues that “connecting the strider to the connector to avoid any loose parts or

⁶(...continued)
engineering degree with two years of industry experience.”); *see* Norgren PFF 3.16 (“In 1993, Wiskamp was a person of ordinary skill in the art as it relates to the devices described and claimed in the ‘392 patent. Wiskamp ’07 Tr. 225”); SMC Brief at 4 n.2 (referring to the ID); Staff Br. at 9 (referring to the ID).

for ease of use would have been obvious.” In fact, it submits that such a connection is as unpatentable as attaching a hinged lid to a lantern, as in *Adams v. Bellaire Stamping Co.*, 12 S.Ct. 66 (1891). *Id.* at 13-22; *see Id.* at 7-8 (discussing the “hinged Palatchy connector,” a patent (U.S. Patent No. 4,915,418 to Palatchy (RX-27) (“the ‘418 Palatchy patent”) raised in the underlying investigation).

Finally, SMC argues that there has been no proof of secondary considerations, and that such considerations could not overcome a strong *prima facie* case of obviousness. *Id.* at 11-12, 22-24.

The Staff argues that “the only difference between the SMC old-style connector and the asserted claims is a pivotally mounted side,” and “there existed a strong need to create a connector that had no loose parts.” It is argued that the evidence shows “that the prior art taught at least one way to achieve that goal: a hinged side. Thus, when faced with the problem of creating a clamp with ‘no loose parts,’ one skilled in the art would have selected a pivoting side as one of the known and obvious solutions to the problem.” Staff Br. at 10 (citations omitted).⁷

The Staff further argues that “yet another reason for modifying the SMC old-style

⁷ The Staff identified five items of alleged prior art in its brief: (1) the SMC old-style connector (RPX-002); (2) the ‘418 Palatchy patent, mentioned *supra*; (2) U.S. Patent No. 4,533,020 to Yamazaki (RX-22) (“the ‘020 Yamazaki patent”), which the Staff describes as generally disclosing the SMC old-style connector, and which was discussed in the ID; (3) a Japanese patent application (58-142084) listing inventor Masakazu Fukuoka (RX-33) (“the Fukuoka reference”), which was admitted into evidence in the underlying investigation but which played little or no role in SMC’s original case or in this remand proceeding; and (5) European Patent Application 0 261 711 A2, listing inventors Fausto et al. (RX-43) (“the Fausto reference”), which similarly was admitted during the underlying investigation but has played little or no role in SMC’s case. Staff Br. at 9. In its main argument (“Differences Between the Claimed Invention and the Prior Art”), the Staff refers specifically only to the SMC old-style connector, and to a much lesser extent, the ‘418 Palatchy patent and the ‘020 Yamazaki patent. *Id.* at 10-15.

connector to include a pivoting side would be to facilitate the use of the clamp. For example, the user could hold the connector in place with one hand while using the other hand to place the FRL flanges into the connector.” *Id.* (citations omitted). The Staff argues that “the proposed modification of the SMC old-style connector would have been a common sense solution well within the capabilities of one skilled in the art.” *Id.* Finally, the Staff submits that there is insufficient evidence relating to secondary considerations to rebut a finding of obviousness. *Id.* at 15-16.

Norgren argues that it has not been proven that all elements of the ‘392 patent invention were present in the prior art, specifically that SMC failed to prove that a four-sided generally rectangular clamp existed at the time of the ‘392 patent’s invention in 1993. Norgren also argues that no proof was offered in the initial hearing in 2007, or in the remand hearing, “that the alleged physical example of the old SMC clamp (RPX-002) existed in 1993.” Norgren Br. at 6.

In addition, Norgren contends that the record lacks evidence relating to the transition from two- and three-sided clamps to four-sided clamps, such as: a reason to make the change; how one of ordinary skill would choose a four-sided rectangular clamp; the expectations of success if the transition were made; and why a person of ordinary skill would make the transition. Indeed, Norgren asserts that there is no evidence as to why a person of ordinary skill in the art in 1993 would make the specific combination found in the ‘392 patent. *Id.* at 7-9.

Norgren further contends that SMC and its expert, Dr. Trumper, have engaged in hindsight engineering, and have failed to show that all prior art elements existed and that the exact combination at issue was obvious to a person of ordinary skill in 1993. For example, it is argued that “[a]lthough Trumper is qualified to opine on the ease of making a sketch of a

possible FRL connector, he lacks the experience to opine on designing an FRL connector that would *actually work and be capable of being produced* by real world producers of FRLs in 1993.” In any event, Norgren argues that the ‘020 Yamazaki and the ‘418 Palatchy patents in fact “teach away” from the design of the ‘392 patent. *Id.* at 9-17 (emphasis in original).

Finally, Norgren argues that secondary considerations support a finding of validity, including a long felt need for a clamp that allowed for replacement FRL units without shutting down a factory’s compressed air system for an extended length of time, as well as for a clamp that had no loose parts; the failure of others to solve the problems of easy replacement and loose parts; the commercial success of the ‘392 patented clamp; and copying. *Id.* at 17-18.

B. The Prior Art

The only alleged prior art items that SMC relies upon in its brief are the SMC old-style connector and the ‘418 Palatchy patent. Similarly, while the Staff identified five alleged items of prior art, it relies only upon the SMC old-style connector, the ‘418 Palatchy patent, and the ‘020 Yamazaki patent.⁸ There is no dispute that the ‘418 Palatchy patent and the ‘020 Yamazaki patent are prior art to the ‘392 patent. A question is raised, however, with respect to the physical exhibit that SMC and the Staff use as an example of the SMC old-style connector.

In that regard, Norgren argues that “there is no proof in either hearing that the alleged physical example of the old SMC clamp (RPX-002) existed in 1993.” Norgren does, however, admit that the ‘020 Yamazaki patent (which, at least according to the Staff, discloses the SMC old-style connector) is prior art, and offers argument relating to that patent. Norgren Br. at 6-7;

⁸ Although the prior art status of the Fukuoka reference and the Fausto reference is not in dispute, no party advances those references against the validity of the ‘392 patent.

Norgren Reply at 3.

SMC argues that RPX-002 was admitted at the initial hearing in 2007, and referred to as prior art in the ID. It is argued that although Norgren petitioned for review of the ID, it did not seek review of the SMC old-style connector's status as prior art, and made no such assertion against the prior art status of RPX-002 until its prehearing statement in this remand proceeding, just nine days before the remand hearing. Further, SMC argues that an objection to RPX-002 was overruled during the remand hearing, and that Norgren's continued objection to the old-style connector, as exemplified in RPX-002, is both untimely and baseless. SMC Br. at 2 n.1 (citing Remand Tr. 40); SMC Reply at 1-2 (citing Initial Tr. 438-439).

The Staff, in its brief, also argues that Norgren "made no objection as to any foundational deficiency regarding RPX-002 when it was entered into evidence" during the initial hearing, and Norgren's belated argument concerning the physical exhibit should be rejected. Staff Br. at 6 (citing Initial Tr. 439). In its reply, the Staff lays further foundation for RPX-002 by referring to the initial hearing testimony of SMC fact witness, Timothy Kuchta, to the effect that the physical exhibit is an SMC old-style connector. Staff Reply at 4 (citing Kuchta Initial Tr. 512).

A review of the record shows that SMC and the Staff are correct that RPX-002 was admitted into evidence during the initial hearing in 2007 as representative of the type of SMC connector that existed before 1993, and that no objection was made to the exhibit at that time for any reason. Initial Tr. 437-438. Further, the unrebutted testimony of SMC's fact witness Kuchta during the 2007 hearing shows that he recognized RPX-002 as an SMC old-style connector. Kuchta Initial Tr. 511-512. Indeed, in its remand briefing related to RPX-002, Norgren has pointed to no challenge to the admissibility of the physical exhibit during the 2007 investigation,

or the facts represented by SMC and confirmed by its witness to the effect that RPX-002 is an SMC old-style connector. Thus, RPX-002 was properly admitted into evidence during the initial hearing, and properly treated as both prior art to the '392 patent, and an exemplar of the SMC old-style connector. The inquiry into the prior art status of RPX-002 properly stops here.

Consequently, Norgren's recent objection to the physical exhibit during the remand hearing was untimely, as is the related argument made in its brief. Nevertheless, during the remand hearing, when Norgren counsel objected to the questioning of SMC's expert witness concerning RPX-002 as a prior art device, the undersigned overruled the objection, stating that Norgren could bring out any lack of foundation on cross-examination. Remand Tr. 39-42. This Norgren did not do.

Accordingly, it is found that RPX-002 is both properly in evidence and properly analyzed as a prior art device, specifically an SMC old-style connector. In sum, the prior art asserted against the '392 patent by SMC and the Staff consists of (1) the SMC old-style connector as exemplified by RPX-002, (2) the '020 Yamazaki patent, and (3) the '418 Palatchy patent.

C. Presumption of Validity

As indicated above, SMC argues that based on the Supreme Court's *KSR* decision, the rationale underlying the presumption of patent validity is "much diminished" in this case because Norgren knew about the SMC old-style connector, yet failed to disclose it to the PTO, and thus the PTO did not consider that prior art during prosecution of the '392 patent. SMC Br. at 12-13 (citing *KSR*, 550 U.S. at 426). While this issue is afforded little briefing by SMC and Norgren,⁹

⁹ In response to a similar argument in SMC's prehearing statement, Norgren appears in its main brief to oppose such arguments. Norgren Br. at 4.

and no briefing by the Staff, it does bear on fundamental principles of patent law that must be considered and applied in this case.

SMC's argument is based on dicta in the Court's *KSR* opinion concerning "Engelgau," which was the patent at issue in *KSR*, and "Asano," which was a prior art patent used to attack the validity of Engelgau's claim 4. Having held that Engelgau's claim 4 is obvious in view of Asano, the Court added:

We need not reach the question whether the failure to disclose Asano during the prosecution of Engelgau voids the presumption of validity given to issued patents, for claim 4 is obvious despite the presumption. We nevertheless think it appropriate to note that the rationale underlying the presumption – that the PTO, in its expertise, has approved the claim – seems much diminished here.

KSR, 550 U.S. at 426.

Thus, the Court did not reach the question of whether failure to disclose Asano voided the presumption of validity, and it is unclear whether that presumption would have been voided even if the Court had ultimately found that the applicant failed to disclose it. It is, however, clear that the Court underscored the rationale underlying the presumption, which is that the PTO is presumed to approve patent claims based upon the exercise of its expertise and in view of the prior art. Thus, inasmuch as Asano was not before the PTO, the Court expressed its view that the rationale "seems much diminished" in that case. The effect that such a diminished rationale might have on an obviousness analysis is not set forth in the *KSR* opinion because obviousness was found independently on other grounds.

Nevertheless, as argued in SMC's brief, and as indicated in *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350 (Fed. Cir. 1984), the Federal Circuit has long

differentiated between prior art that was before the PTO during prosecution, and art that was not. In that case, the Court provided an intricate history and analysis of section 282 of the Patent Act (35 U.S.C. § 282), and the presumption that the PTO applies its expertise in issuing patents, concluding, as follows:

To summarize on this point, § 282 creates a presumption that a patent is valid and imposes the burden of proving invalidity on the attacker. That burden is constant and never changes and is to convince the court of invalidity by clear evidence. Deference is due the Patent and Trademark Office decision to issue the patent with respect to evidence bearing on validity which it considered but no such deference is due with respect to evidence it did not consider. All evidence bearing on the validity issue, whether considered by the PTO or not, is to be taken into account by the tribunal in which validity is attacked.

725 F.2d at 1360.

Accordingly, in this case, the asserted claims of the '392 patent, like all patent claims, are presumed to be valid, and the burden rests solely upon the attackers (SMC and the Staff) to prove invalidity by clear and convincing evidence. That burden is not changed by the fact that particular prior art now at issue in this proceeding was, or was not, before the PTO. Yet, with respect to art that was before the PTO during prosecution, deference is due the PTO's decision to issue the patent; and with respect to art that was not before the PTO, no deference is due as to that particular art. *Id.* at 1359-60 ("When an attacker, in sustaining the burden imposed by § 282, produces prior art or other evidence *not* considered in the PTO, there is, however, *no reason to defer* to the PTO so far as *its* effect on validity is concerned. Indeed, new prior art not before the PTO may so clearly invalidate a patent that the burden is fully sustained merely by proving its existence and applying the proper law; but that has no effect on the presumption or on who has

the burden of proof.”) (Emphasis in original).

Specifically, in this case, the ‘418 Palatchy patent was considered by the PTO during prosecution of the ‘392 patent. JX-001 (‘392 patent), cover. There is, however, no evidence, or argument by any party, that either the SMC old-style connector, or the ‘020 Yamazaki patent, was before the PTO, and thus no particular deference is due as to those specific items of prior art.

D. Analysis of the Prior Art

SMC argues that “the only difference between independent claim 1 of the ‘392 patent and SMC’s old-style connector” is “Norgren’s pivotal connection.” SMC Br. at 3. Thus, it is argued, “[t]he issue as to obviousness is whether it would have been obvious to one of ordinary skill in the art to pivotally or hingedly connect the strider to the connector if one were concerned that the strider was a loose part that could be lost, or for ease of use.” *Id.* at 4. Similarly, the Staff argues that “the SMC old-style connector has all the limitations recited in claim 1 with the exception of ‘one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position.’” Staff Br. 7 (quoting claim 1 of the ‘392 patent). SMC and the Staff then rely on the ‘418 Palatchy patent and the testimony of SMC’s expert witness, Dr. Trumper, to argue that the addition of a pivoting or hinged strider would have been obvious to one of ordinary skill.

Norgren disputes the proposition that, except for the pivoting side, the SMC old-style connector contains all elements of the claimed invention. Norgren Br. at 6; Norgren Reply at 3-4.

For the reasons discussed below, it is found that the SMC old-style clamp does not

contain all elements or limitations of claim 1 other than the pivotally mounted side.

SMC quotes the ID that issued after the 2007 hearing to the effect that Norgren's expert witness during that hearing (but not in this remand proceeding), Mr. Wiskamp, testified that the only difference between the SMC old-style clamp and the device of claim 1 is the pivotally mounted side. SMC Br. at 3; Staff Br. at 6 (quoting the related Wiskamp 2007 hearing testimony). The portion of the unreviewed ID that discusses the Wiskamp testimony, as it pertains to the ultimate question of obviousness, is as follows:

It must be observed that Norgren's expert did, in fact, admit during his deposition that the only difference between prior art such as the old SMC connector and the claimed invention of the '392 patent is the fact that one side of the clamp pivots. At the hearing, it was impossible for him to distance himself from that prior testimony. *See* Wiskamp Tr. 331-343. Indeed, he had little choice but to make this admission in view of the fact that by the time of the hearing Norgren's proposed construction of the term "generally rectangular ported flange," and the four-side clamp limitation (including the "adapted" nature of the clamp) had become extremely broad so as to capture the accused SMC devices. As argued by SMC, it would, therefore, be permissible to look only to the "pivotally mounted" limitation of claim 1 to determine whether or not the claim is valid. Indeed, if Norgren's broad interpretation of claim 1 were adopted as the proper construction of the claim there would be no choice but to do so. However, when the claim is properly construed to be more limited, as detailed above in the section on claim construction, the record does not contain clear and convincing evidence of obviousness.

ID at 54-55.

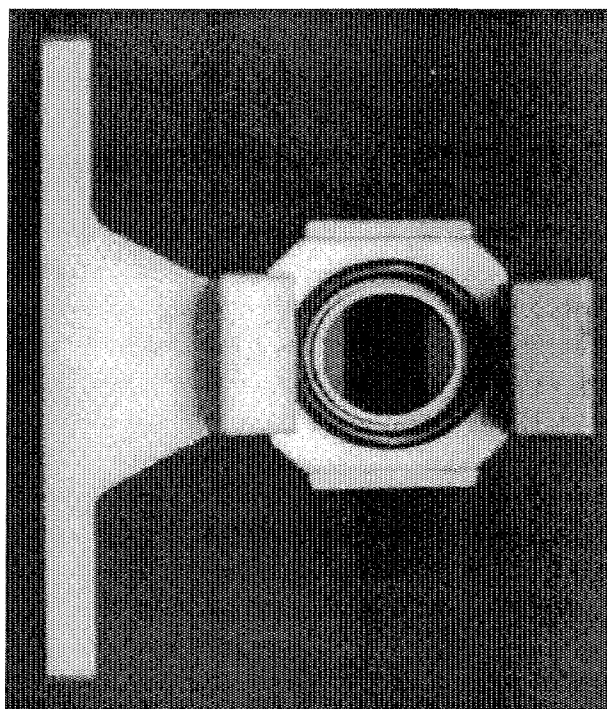
Notwithstanding the above-referenced testimony of Mr. Wiskamp, the question presented in this remand proceeding -- *i.e.*, whether the SMC old-style clamp contains all of the elements or limitations of claim 1, except the pivotally mounted side -- is answered in the negative.

The construction of "a generally rectangular ported flange" relied upon in the unreviewed

ID excluded the SMC old-style connector from containing all the required elements because it was adapted to engage only a pair of mounting ears, rather than a flange having projections on all four sides. The Federal Circuit has since held that claim construction to be in error, and that the flange in question need not have projections on all four sides. *Norgren*, slip op. at 8. Yet, the fact that “a generally rectangular ported flange” should be construed more broadly than originally determined, does not necessarily mean that the SCM old-style connector is a clamp that contains all the elements required by claim 1, except the pivotally mounted side.

The precise claim language that the SMC old-style clamp must satisfy is “a four-sided, generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges” JX-001, col. 4, lines 49-52.

The following is an image of the SMC old-style connector (RPX-002), as supplied in the Staff’s brief:



An examination of RPX-002 shows that the connector is not generally rectangular, and is not even four-sided. *See* Norgren Reply at 3. No party has detailed precisely where a generally rectangular configuration is alleged to be found in the device. Further, when one considers only the four sides of the connector that would align with the sides of a four-sided flange, one notices that the four sides in question do not join one another, as one finds in a rectangle, but rather that they are separated from one another by intervening sloped sides.¹⁰

Consequently, merely modifying the SCM old-style connector to add a pivotally mounted side would not result in a device that contains all limitations of the asserted claims of the '392 patent. Thus, for that reason alone, the obviousness arguments of SMC and the Staff cannot prevail.

Similar observations may be made with respect to the device disclosed in the '020 Yamazaki patent. There is a dispute among the parties as to whether and to what extent it discloses the SMC old-style clamp. *See, e.g.,* Norgren Br. at 6; Staff Br. at 8. In any event, there has been no showing that the patent discloses "a four-sided, generally rectangular clamp." Indeed, the device depicted in the patent's illustration does not appear to be either four-sided, or rectangular. Nor does there appear to be any portion of the specification that discloses a four-sided, generally rectangular clamp. *See* RX-22 (the '020 Yamazaki patent).

¹⁰ In contrast, the demonstrative exhibit reproduced on page 5 of SMC's brief (RDX-003), a drawing entitled "Modified SMC Old Style Connector A," does not appear to be based on RPX-002, which is an actual SMC old-style connector, because the vertical sides are clearly elongated when compared to the photographic image supplied by the Staff, *supra*, and especially when compared to RPX-002. In any event, all demonstrative exhibits (including RDX-003) were admitted during the hearing only for the purpose of illustrating testimony when read later from the transcript. The parties were expressly notified that demonstrative exhibits were not admitted as substantive evidence. *See* Remand Tr. 63-64, 147.

In addition, as indicated above, in the unreviewed ID issued after the 2007 hearing, the undersigned indicated that even if SMC's old-style connector, as exemplified in RPX-002, were adapted to engage "a generally rectangular ported flange," obviousness could not be found because there was insufficient proof in the record as to "how one of ordinary skill would have integrated a pivoting side into the clamp design." ID at 55-56. The Federal Circuit's subsequent holding as to the proper construction of the term "generally rectangular ported flange" has not changed the content of the record and thus does not require a different conclusion. Nor does the additional testimony and evidence received during the remand hearing require a different conclusion with respect to the pivotally mounted side limitation.

SMC states in the Background section of its brief that, "[a]s to the hinged side, Dr. Trumper stated (without the need for citation to any other reference) that it would have been obvious to one of ordinary skill in the art to hingedly connect the strider to the connector. In addition, Dr. Trumper also referred to the prior art Palatchy patent . . . which shows a hinged connector to connect two flanges together, as an example that such connectors were known prior to the '392 patent." SMC Br. at 7 (citing Trumper Remand Tr. 56, and referring to a reproduced Figure from the '418 Palatchy patent in its brief). That statement by SMC fairly summarizes its argument. Indeed, later in the Argument section of its brief, SMC relies largely on the holding in the Supreme Court's *KSR* opinion to argue that the results of ordinary innovation are not patentable, that hingedly connecting the strider "would have been just 'common sense,'" and that one need not strictly apply the TSM test (discussed above in section II of this ID) to determine obviousness. SMC argues that according to Dr. Trumper, "'a hinge would be an obvious mechanical choice' to anyone skilled in the art in 1993." *Id.* at 4-8, 13-16 (quoting, *inter alia*,

Remand Tr. 47-48).

SMC further argues that, in contrast, Norgren's expert witness improperly focused on what occurred to him in 1993 to solve the problem of loose clamp parts, rather than what would have been obvious to one of ordinary skill, and in fact consistently applied the wrong standards to conclude that the asserted claims are not obvious. *Id.* at 8-12.

The Staff presents a more methodical analysis of the scope and content of the prior art, and the asserted claims of the '392 patent. The Staff's argument reaches the same conclusion as that of SMC and does not differ in substance from that of respondents. *See* Staff Br. at 5-15.

Norgren argues that SMC has failed to show why a person of ordinary skill in 1993 would have chosen to make the specific combination found in the '392 patent, including a pivotally mounted side to enable the flanges on an FRL to be received and then clamped into operative position as required by claim 1 of the '392 patent. Rather, Norgren asserts that SMC's expert witness provided conclusory statements about what was supposedly reasonable, simple or well-known to those of ordinary skill without "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Norgren Br. at 8-9 (quoting *KSR* at 418).

Norgren further argues that while a rigid TSM test need not be applied, SMC presented only some evidence that a problem existed in 1993 and thus failed to satisfy even a substantially relaxed TSM test. Norgren states that in contrast its expert witness, Mr. Wolfe, who designed FRLs for two companies, testified that a clamp with a pivotally mounted side would have seemed difficult, if not impossible, to manufacture. *Id.* at 9-15.

Additionally, Norgren argues that the '020 Yamazaki patent and the '418 Palatchy patent,

actually teach away from the design of the '392 patent. The '020 Yamazaki patent teaches away, in Norgren's view, because it is not shaped like the device of the '392 patent, and because components are bolted together rather than pivoted into operating position. The '418 Palatchy patent, in Norgren's view, which discloses a circular clamp, is meant for water systems only, and thus rather than using the clamp to seal the flange faces of parallel FRL units (as in the '392 patent), the Palatchy device relies on the pressure of fluid passing through pipes to cause tighter sealing of the gasket against the pipes due to the shape of the gasket. *Id.* at 14-17 (quoting the '418 Palatchy patent specification at col. 3, lines 19-26).

Norgren's criticism of the testimony of SMC's expert is well-taken. In a crucial portion of his testimony, which is cited and relied upon by both SMC and the Staff, Dr. Trumper erroneously stated that the SCM old-style clamp contains all limitations of claim 1 except for the pivotally mounted side, and then with respect to the additional pivotally mounted side limitation, testified as follows:

Q. Dr. Trumper, did you arrive at any conclusion as to the obviousness of claim 1 in view of the SMC old style connector?

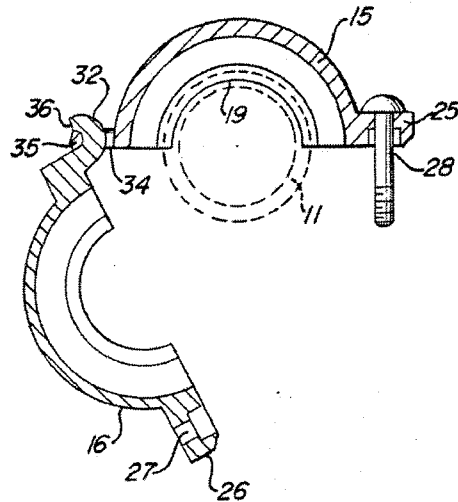
A. Yes, conducting that obviousness analysis as I described it, the change of adding a hinged side, which is the only difference, it's the only feature of the claims not present in the SMC old style connector, that change is a very simple one, straightforward, would be an obvious change for one of skill in the art.

Q. I see in the chart here that a Palatchy reference is listed in the pivotally mounted row. Did you rely on the Palatchy reference in arriving at your conclusion?

A. No, you can make this conclusion of obviousness just solely on the basis of the SMC connector, but another example of hinges used for connecting flanges in pipes, the Palatchy reference shows a hinged connector for connecting water pipes and the like.

Trumper Tr. 55-56.

Therein is the crux of the invalidity case against the '392 patent. The addition of a pivotally mounted side is supposedly so obvious that one need not even look to a specific prior art hinge or strider. If one does provide an example from the prior art, Dr. Trumper testified that one may cite the '418 Palatchy patent, which was before the PTO during prosecution of the '392 patent, and happens to be a circular, hinged connector used only to connect pipes that conduct water, rather than a device that could be used to conduct compressed air at much higher pressures. Wolfe Remand Tr. 182-183. An illustration from the patent is reproduced below from the Staff's brief:



RX-027 (the '418 Palatchy patent), Fig. 6.

The Staff is correct that ample evidence exists to demonstrate a motivation to make the claimed invention, *i.e.*, ease of use and no loose parts. *See* Staff Reply at 4-6. What is missing from Dr. Trumper's testimony when read as a whole, and what is missing from SMC's and the

Staff's case, is a clear explanation of why a pivotally mounted side would have been obvious, and how one of ordinary skill, rather than one looking in hindsight, could have combined elements in 1993 to arrive at the device claimed in the '392 patent.

Such is a particularly daunting challenge for the attackers of the '392 patent when Dr. Trumper testified, as seen above, that he did not in fact rely on the '418 Palatchy patent, or apparently any prior art, other than a clamp that admittedly lacks the element in question to develop his conclusion. While a rigid TSM analysis need not be applied, "a flexible approach to the TSM test prevents hindsight and focuses on evidence before the time of invention." *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1260 (Fed. Cir. 2007). SMC in this case chose not to apply such a test.

Further, Dr. Trumper's testimony that adding a hinged strider would not affect air pressure or any other variable related to the integrity of the seal is unsupported, and not put into the context of the understanding of one of ordinary skill in 1993. Trumper Remand Tr. 43-49. Although an FRL may be a "simple component" in comparison to a WWII bomber aircraft, to use Dr. Trumper's analogy, the record remains unclear as to whether one of ordinary skill would have anticipated success or perceived any design challenges when adding a pivotally mounted side in view of the numerous variables that affect FRL operations, such as variable temperatures, the frequent use with corrosive gases, and stress on the device. Trumper Remand Tr. 101-102; Wolfe Remand Tr. 179-191; *see PharmaStem*, 491 F.3d at 1360 (discussed above, concerning the reasonable expectations of one of ordinary skill in the art).

As indicated above in the summary of that parties' arguments, SMC relies at length in its brief on the Supreme Court's *Adams* decision from 1891, and even reproduced therein Figure 1

(the only Figure) from the related patent issued in 1865 to Irwin, U.S. Patent No. 50,591 (attached to SMC's brief as Ex. A), as though the lantern depicted therein had been identified as prior art against the '392 patent (which SMC did not do). The Court, in that case, held that the addition of a detachable top or lid to a lantern that could be opened for cleaning or adding fuel was not patentable because it was merely an aggregation of old devices, each working out its own effect, without producing anything novel. 12 S.Ct at 67.

SMC argues that the "factual situations in *Adams* and in the case at bar are quite similar. In *Adams*, the top was secured by a hinge to permit the lantern to be opened and closed (to replace the fuel) while at the same time preventing the top from becoming a loose part which could be lost. Likewise, in the case at bar, the loose part is secured by a hinge to permit the connector to be opened and closed (to replace and receive the flanges) while at the same time preventing the strider from becoming a loose part which could be lost." SMC Br. at 18-19.

SMC's reliance on the *Adams* case, and particularly the device in the related patent, is surprising in view of its absence from the remand hearing. This reliance is, in any event, thoroughly unpersuasive. Whether or not a hinged top or lid on a lantern permits ease of refueling or cleaning has nothing to do with the type of seal that must be created by clamping the subject flange in the '392 patent. Even the utility of the lantern top, if any, is unclear. There is no indication that the hinge or the lantern top was under pressure, or helped to create a seal. The top of the lantern had no apparent association with a flange.

Accordingly, a top connected to the lantern by a hinge has no relevancy to the obviousness issue to be decided in this case. SMC's lengthy exposition on the *Adams* opinion and the patent at issue therein is part of an obviousness defense that fails to present clear and

convincing evidence that any claim of the '392 patent is invalid.

E. Secondary Considerations

The unreviewed ID that issued after the 2007 hearing addressed the question of secondary considerations. It was found that although there had been a need for an FRL such as that claimed by the '392 patent, and the Norgren product made in accordance with the patent was well received, “[i]n the event that the prior art would have otherwise rendered the claims obvious, secondary considerations, or objective indicia of nonobviousness, would have provided little support for the validity of the claims.” ID at 57-59.

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Although Norgren has added to the evidence presented during the initial hearing, the conclusion concerning secondary considerations, adverse to complainant, is the same. Moreover, the decision by the Federal Circuit changing the construction of the claim term “generally rectangular ported flange” does not affect the question of secondary considerations.

IV. Conclusion

Accordingly, for the reasons discussed above, it is the INITIAL DETERMINATION of the undersigned that it has not been shown that any asserted claim of the '392 patent is invalid due to obviousness.

To expedite service of the public version, each party is hereby ORDERED to file with the Commission Secretary by no later than August 13, 2010, a copy of this document with brackets that show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the Administrative Law Judge, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the document to be confidential, and thus makes no request that any portion be redacted from the public version of this document, then a statement to that effect shall be filed in lieu of a document with brackets.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.



Carl C. Charneski
Administrative Law Judge


Issued: August 5, 2010

**In the Matter of Certain Connecting Devices
(" Quick Clamps") for Use with Modular
Compressed Air Conditioning Units, Including
Filters, Regulators, and Lubricators ("FRL's")
That Are Part of Larger Pneumatic Systems and the
FRL Units They Connect**

INV. NO. 337-TA-587

PUBLIC CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **INITIAL DETERMINATION** was served upon Mareesa Frederick, Esq., Commission Investigative Attorney, and the following parties via first class mail and air mail where necessary on **AUG 25 2010**


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**In the Matter of Certain Connecting Devices
("Quick Clamps") for Use with Modular
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Filters, Regulators, and Lubricators ("FRL's")
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FRL Units They Connect**

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