

**United States Court of Appeals
for the Federal Circuit**

NORGREN INC.,
Appellant,

v.

INTERNATIONAL TRADE COMMISSION,
Appellee,

AND

**SMC CORPORATION AND SMC CORPORATION OF
AMERICA,**
Intervenors.

2011-1349

On appeal from the United States International Trade
Commission in Investigation No. 337-TA-587.

Decided: November 14, 2012

CARL F. MANTHEI, The Ollila Law Group LLC, of La-
fayette, Colorado, argued for appellant. With him on the
brief was CURTIS J. OLLILA.

MARK B. REES, Attorney, Office of the General Counsel, United States International Trade Commission, of Washington, DC. With him on the brief were JAMES M. LYONS, General Counsel, and ANDREA C. CASSON, Assistant General Counsel for Litigation.

ARTHUR I. NEUSTADT, Oblon, Spivak, McClelland, Maier & Neustadt, L.L.P., of Alexandria, Virginia, argued for intervenors. With him on the brief were THOMAS J. FISHER, BARRY J. HERMAN and ERIC W. SCHWEIBENZ.

Before LOURIE, LINN, and MOORE, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* LINN.

Dissenting opinion filed by *Circuit Judge* MOORE.

LINN, *Circuit Judge*.

Norgren, Inc. (“Norgren”) appeals from the International Trade Commission’s (“Commission”) determination of no violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) (“section 337”) by the importation or sale by SMC Corporation and SMC Corporation of America (collectively “SMC”) of devices alleged to infringe Norgren’s U.S. Patent No. 5,372,392 (“392 Patent”) based on the Commission’s conclusion that claims 1-5, 7, and 9 are invalid as obvious. *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 Sys. and the FRL Units They Connect*, Inv. No. 337-TA-587, slip op. at 1-3, 42 (U.S. Int’l Trade Comm’n June 3, 2011) (Commission Opinion) (“*Commission Op.*”). Because the decision of the Commission is supported by substantial evidence and is not arbitrary, capricious, or legally erroneous, this court affirms.

I. BACKGROUND

A. The '392 Patent

The '392 Patent discloses a “four-sided, generally rectangular clamp” for connecting two fluid flow elements, especially the fluid flow elements used in compressed air systems—filters, regulators, and lubricators. '392 Patent col. 1 ll. 6-10, 39-54. According to the '392 Patent, previous “connecting means” were “relatively expensive to produce and/or have consisted of loose parts that have to be assembled by the user, some of which are susceptible to being lost.” *Id.* col. 1 ll. 26-31. The objective of the invention in the '392 Patent was to “provide a simple, relatively inexpensive, preferably unitary connecting means . . . which permits ready disconnection of the elements when desired.” *Id.* col. 1 ll. 32-36. The only independent claim of the '392 Patent—claim 1—claims a four-sided, generally rectangular clamp structure having a hinged side that can be opened to receive the flanges of the fluid flow elements and closed to hold the flanges:

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 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.

Id. col. 4 ll. 44-66 (emphasis added).

B. Previous Proceedings

Norgren filed a complaint with the Commission asserting that the importation or sale of SMC devices alleged to infringe the '392 Patent violates section 337. The administrative law judge ("ALJ") found no section 337 violation because he construed the claims to require four projecting rims on the flange of the fluid flow element whereas the SMC flanges have only two such rims. The ALJ also found the claims of the '392 Patent to be nonobvious. On appeal, this court reversed the noninfringement determination because "the 'generally rectangular ported flange' of the asserted claims of the '392 patent is not limited to a flange having four projecting rims." *Norgren Inc. v. Int'l Trade Comm'n*, 336 F. App'x 991, 995-96 (Fed. Cir. 2009) (nonprecedential) ("*Norgren I*"). This court also vacated the ALJ's determination of nonobviousness and remanded for the ALJ to consider obviousness under the new claim construction. *Id.* at 996.

On remand, the ALJ, focusing on the obviousness of the clamp itself, found the asserted claims of the '392 Patent not invalid under 35 U.S.C. § 103. The Commission reversed the decision of the ALJ, finding that the asserted claims of the '392 Patent were obvious, and thus

finding no section 337 violation. The Commission found that a prior art SMC clamp (“old-style SMC connector”) is both four-sided and generally rectangular, that the addition of a hinge to the old-style SMC connector would have been obvious to a person having ordinary skill in the art, and that the evidence failed to show secondary considerations to support a finding of nonobviousness. The Commission also found that the limitations of the dependent claims did not render them nonobvious. Norgren appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(6).

II. DISCUSSION

A. Standard of Review

The Commission’s interpretation of the patent statute is reviewed de novo and factual findings are reviewed for substantial evidence. *Corning Glass Works v. U.S. Int’l Trade Comm’n*, 799 F.2d 1559, 1565 & n.5 (Fed. Cir. 1986) (citing 5 U.S.C. § 706). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 477 (1951) (quoting *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)) (internal quotation marks omitted). Substantial evidence must be sufficient “to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury.” *Id.* (quoting *NLRB v. Columbian Enameling & Stamping Co.*, 306 U.S. 292, 300 (1939)) (internal quotation marks omitted). Moreover, “the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency’s finding from being supported by substantial evidence.” *Consolo v. Fed. Mar. Comm’n*, 383 U.S. 607, 620 (1966).

B. Parties' Arguments

Norgren argues that there was insufficient evidence that the old-style SMC connector is four-sided and generally rectangular and that it would not have been obvious to one of ordinary skill in the art to solve the problems of loose parts and ease of replacement by adding a hinge to a four-sided, generally rectangular clamp. In particular, Norgren argues that the expert witness for SMC, David Trumper ("Trumper"), was over-qualified and not familiar with the relevant industry at the time of the invention claimed in the '392 Patent; that there was insufficient evidence that one of ordinary skill in the art would reasonably expect the addition of a hinge to be successful; that the prior art teaches away from the claimed invention; and that there was no evidence of a teaching, suggestion, or motivation to adopt the solution claimed in the '392 Patent. Additionally, Norgren argues that secondary considerations support a finding of nonobviousness. Finally, Norgren argues that the Commission's finding of obviousness was arbitrary and capricious because it contradicted the earlier finding of nonobviousness and that the Commission was required to uphold the ALJ's findings of fact unless they were clearly erroneous. Norgren did not argue on appeal that the limitations of the dependent claims would preserve their validity if independent claim 1 is obvious.

The Commission responds that the clamp claimed in the '392 Patent would have been obvious to one of ordinary skill in the art at the time of the invention. The Commission argues that the old-style SMC connector is four-sided and generally rectangular and that the addition of the hinge was an obvious solution to the problems of loose parts and ease of use based on both the prior art and the common sense of a person having ordinary skill in the art. In support of these findings, the Commission argues that Trumper was a qualified expert witness and

that a person of ordinary skill in the art would have had a reasonable expectation of success in combining the hinge with the old-style SMC connector. The Commission also argues that it reasonably found the evidence of secondary considerations to be insufficient to support a finding of nonobviousness. Finally, the Commission argues that its decision was not arbitrary and capricious and that it reviews a decision of an ALJ de novo. SMC makes similar arguments.

C. Applicable Law

An invention may not be patented if it would have been obvious at the time of the invention to a person having ordinary skill in the art. 35 U.S.C. § 103(a). Obviousness is a question of law. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 427 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). However, several factual inquiries underlie the determination of obviousness: the scope and content of the prior art, the differences between the claims and the prior art, the level of ordinary skill in the art, and secondary considerations. *Graham*, 383 U.S. at 17-18. The burden is on the challenger of the patent to prove by clear and convincing evidence that the patent claims are invalid. *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416. A flexible teaching, suggestion, or motivation test can be useful to prevent hindsight when determining whether a combination of elements known in the art would have been obvious. See *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364-65 (Fed. Cir. 2008); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1260 (Fed. Cir. 2007). However, the Supreme Court held that “[t]he obviousness analysis cannot be confined” to a

rigid application of the teaching, suggestion, or motivation test. *KSR*, 550 U.S. at 419. The common sense and ordinary creativity of a person having ordinary skill in the art are also part of the analysis. *Id.* at 420-21. Moreover, “[o]ne 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.” *Id.* at 419-20. “[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.* at 420. This includes, but is not limited to, the problem motivating the patentee. *See id.* (“The first error of the Court of Appeals in this case was to foreclose this reasoning by holding that courts and patent examiners should look only to the problem the patentee was trying to solve. The Court of Appeals failed to recognize that the problem motivating the patentee may be only one of many addressed by the patent’s subject matter.” (citation omitted)).

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.

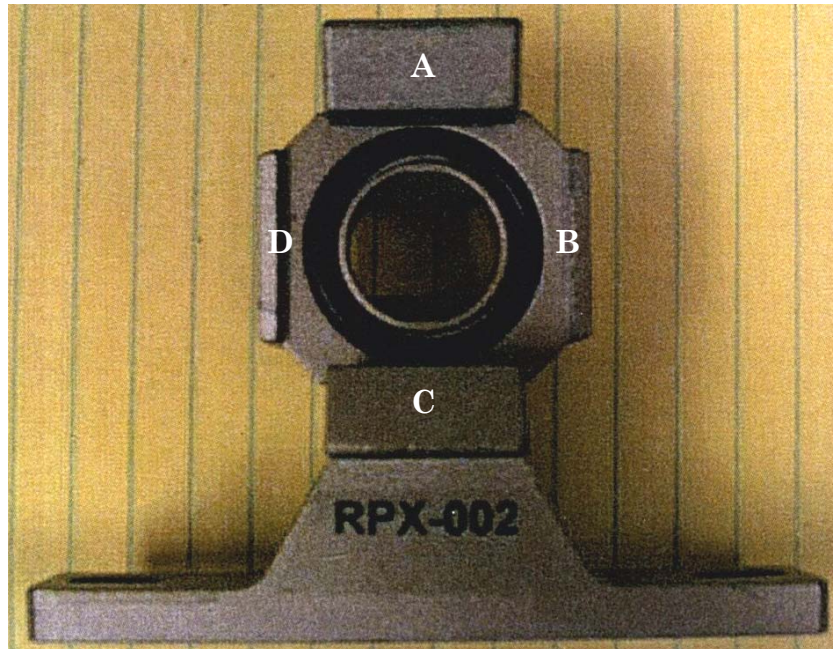
Id. at 421.

D. Four-Sided, Generally Rectangular Clamp

In *Norgren I*, this court found that “[t]he ‘generally rectangular’ language pertains to the overall shape of the flange.” 336 F. App’x at 995. While *Norgren I* specifically addressed the claim language related to the flange, this

court recognizes—consistent with our claim construction in *Norgren I*—that the clamp as a whole, and not merely portions of it, must be four-sided and generally rectangular.

The dispute centers not on the construction of the claims but on the factual question of whether the old-style SMC connector (shown in the figure below, adapted from the Intervenor’s Brief at page 13) is four-sided and generally rectangular.



As a preliminary matter, Norgren questions whether SMC and the Commission Investigative Staff proved that the old-style SMC connector existed prior to 1993—when the application for the '392 Patent was filed. This argument is easily dismissed. First, Norgren made no objection to that exhibit when SMC offered it as representative of a prior art connector. *Commission Op.* at 8; see Hr’g Tr. 438-39, Nov. 27, 2007 (“RPX-002, move that for admis-

sion. And this is a '84 SMC connector.”). Moreover, the record contains the testimony of Timothy Kuchta that “he recognized RPX-002 as an SMC old-style connector.” *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 Sys. and the FRL Units They Connect*, Inv. No. 337-TA-587, slip op. at 13 (U.S. Int’l Trade Comm’n Aug. 5, 2010) (Final Initial Determination); see Hr’g Tr. 512, Nov. 27, 2007. Thus, substantial evidence supports the finding that the old-style SMC connector was in existence prior to 1993.

The Commission’s finding that the old-style SMC connector is both four-sided and generally rectangular is also supported by substantial evidence. First, Norgren’s expert, James Wiskamp (“Wiskamp”), in the first Commission proceeding admitted in a deposition that the only difference between the invention claimed in the ’392 Patent and the old-style SMC connector was the hinge. While Wiskamp later described the shape of the old-style SMC connector differently, the ALJ in the initial proceeding considered Wiskamp’s attempt to distance himself from his deposition statement not credible, and the Commission on remand found no reason to depart from that finding. The Commission had an adequate basis on which to make such a finding.

Second, the Commission properly relied on Trumper’s testimony that the four sides of the old-style SMC connector are those required for its function and that the shape formed by those sides is generally rectangular. This court rejects Norgren’s argument that Trumper was not an appropriate expert because he was not familiar with the relevant industry and was overly-qualified. The person of ordinary skill in the art was determined to be “someone who would have had several years of industry experience working with [Filters, Regulators, and Lubricators] and

connectors or would have had an engineering degree with two years of industry experience.” *Commission Op.* at 26 (internal quotation marks omitted). Trumper was a professor of mechanical engineering at MIT and had experience with pneumatic systems and mechanical connections. Because the person having ordinary skill in the art is a “theoretical construct” and is “not descriptive of some particular individual,” “a person of *exceptional* skill in the art” should not be disqualified because he or she is “not ordinary enough.” *See Endress + Hauser, Inc. v. Hawk Measurement Sys. Pty. Ltd.*, 122 F.3d 1040, 1042 (Fed. Cir. 1997) (emphasis in original). Additionally, Trumper was accepted as an expert in the first proceeding before the ALJ without objection. Thus, the Commission was within its discretion to allow Trumper to testify as an expert and to credit his testimony. *See id.*

Third, the Commission based its conclusion on an examination of the physical exhibit of the old-style SMC connector. The four outer “sides” of the old-style SMC connector are labeled A-D in the above figure. And the Commission found those four sides to be essential in performing the clamping function of the old-style SMC connector in the same manner as the new-style SMC connector previously found to infringe. Moreover, these four sides are a substantial part of the outer portion of the old-style SMC clamp, and hence are decisive when defining its shape.

The Commission concluded that the old-style SMC connector was not only generally rectangular but also four-sided within the meaning of the claim term. It reached that conclusion based on Trumper’s testimony and its examination of the old-style SMC connector that was placed in evidence. From that record, the Commission found that four sides of the old-style SMC connector were essential to its functionality as a connector, notwithstanding the existence of other indents, cutouts, protrusions,

sions and other non-functional structural elements and met the “four-sided” limitation of the claim. The dissent takes a highly restrictive view of the Commission’s ruling and disregards the functioning of the device in counting all surface elements as “sides.” But there is nothing in the record to compel that approach or, more significantly, to conclude that substantial evidence does not support the Commission’s determination.

In *Norgren I*, it was undisputed that the flanges were “generally rectangular” despite the fact that sloped sides replaced corners of the rectangle. See 336 F. App’x at 995-96. The Commission recognized that the old-style SMC connector was characterized by the same type of deviation from a “precise rectangle,” i.e., missing corners, as the flanges in *Norgren I*. *Commission Op.* at 20. Whether the inside, the outside, or the entire thickness of sides A through D in the above figure is considered, the shape of the clamp is a rectangle, absent the corners. The absence of the corners is part of the shape of the old-style SMC connector as a whole, but it does not detract from its *generally* rectangular configuration. Similarly, the thickness or protrusion of the sides does not detract from its generally rectangular shape. While a triangular clamp, a circular clamp, or even a clamp with four sides arranged as a trapezoid would not qualify as “generally rectangular,” the old-style SMC connector does.

The responsibility of this court is not to re-weigh de novo the evidence on close factual questions; it is to review the decision of the Commission for substantial evidence. This court concludes that the Commission’s findings are supported by substantial evidence because “a reasonable mind might accept” that the old-style SMC connector is four-sided and generally rectangular. *Universal Camera*, 340 U.S. at 477 (quoting *Consol. Edison*, 305 U.S. at 229) (internal quotation marks omitted). This

court finds no basis to disturb the decision of the Commission.

E. The Hinge

The Commission properly found that the only difference between the claimed invention and the prior art was the “pivotally mounted” (hinged) side. The parties dispute whether it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the old-style SMC connector with a hinged side.

The Commission found that one of ordinary skill would have been motivated to modify the prior art to achieve the patented invention “to avoid loose parts and for ease of use,” citing expert testimony and the problems with the prior art described in the ’392 Patent. *Commission Op.* at 26-27. The Commission also found that the solution of adding a hinge to the old-style SMC connector was obvious. First, the Commission found that the prior art U.S. Patent No. 4,915,418 (“Palatchy Patent”) taught that adding a hinge to a pipe coupling eliminated loose parts and made the connector easier to use. *Commission Op.* at 28; *see also* Palatchy Patent col. 1 ll. 33-54 (describing the claimed pipe coupling with “hingedly connected” segments that allow the coupling to be “more easily positioned and held in place by the plumber” by allowing the positioning of one segment while “permitting the remaining segments to freely dangle beneath the positioned segment ready for application”). The invention of the ’392 Patent solved similar problems in a similar way. This art is relevant to the invention in the ’392 Patent because the ’392 Patent is also directed to water pipes and cites the Palatchy Patent. ’392 Patent, at [56], col. 4 ll. 34-38. While Norgren argues that Palatchy and the old-style SMC connector teach away from the clamp claimed in the ’392 Patent, nothing indicates that they “criticize,

discredit, or otherwise discourage investigation into the invention claimed” as required for teaching away. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (internal quotation marks omitted).

Second, the Commission found that the addition of the hinge was a common sense solution. Hinges are a common mechanical component that would have been known to those of ordinary skill in the art to solve a loose parts problem. *Commission Op.* at 29-30 & n.18 (citing *Adams v. Bellaire Stamping Co.*, 141 U.S. 539 (1891)). Even Norgren’s expert in the remand proceedings, John Wolfe (“Wolfe”), indicated that a hinge was a common component that one of ordinary skill at the time of the invention would have understood to solve the loose parts problem. Wolfe also testified that there were a finite number of solutions to the loose parts problem. While Norgren argues that the evidence did not show that one of ordinary skill in the art would have expected the addition of the hinge to succeed, the Commission’s conclusion that it did is supported by substantial evidence. Trumper testified that the addition of the hinge did not affect the clamping function. Similarly, Wolfe suggested that the addition of the hinge would not require testing. Also, the Commission correctly rejected Norgren’s argument that the addition of a hinge was nonobvious because Wolfe had not considered it. The correct analysis is whether it would have been obvious to the hypothetical person of ordinary skill in the art, not whether it was obvious to Wolfe personally. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1364 (Fed. Cir. 2001).

Norgren cites *Innogenetics, N.V. v. Abbott Laboratories*, 512 F.3d 1363 (Fed. Cir. 2008), to support its argument that there was insufficient evidence of a motivation to combine the elements and argues specifically that the problem listed in the patent was insufficient motivation.

However, *KSR* expressly stated that “[o]ne 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.” 550 U.S. at 419-20. In this case, the Commission properly found the claims obvious based on evidence of known problems and an obvious solution.

Nothing presented by Norgren relating to secondary considerations undercuts this conclusion. Contrary to Norgren’s arguments, the evidence presented on secondary considerations does not merit a finding of nonobviousness. The Commission agreed with the ALJ that Wiskamp’s testimony on surprise and skepticism following the release of Norgren’s clamp was lacking in detail and lacking support in the record. The Commission also found the evidence insufficient to show long-felt need, and the testimony Norgren cites does not necessitate the opposite conclusion. While Norgren argued that the expert testimony indicating ways to modify the prior art showed failure by others, the Commission found that the testimony did not show that others tried and failed and that Wolfe conceded that the clamp claimed in the ’392 Patent could have been made at the time of the invention. The Commission found that Norgren failed to establish commercial success and failed to show a nexus between any success and the features claimed in the ’392 Patent. *See Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1363 (Fed. Cir. 2012). Finally, the Commission rejected Norgren’s assertion of copying because the clamp accused of being a copy was excluded from the remand proceeding because Norgren failed to provide a foundation. The Commission’s determination of obviousness, including its assessment of secondary considerations, is supported by substantial evidence and is consistent with the law. The invention in the ’392 Patent

was a combination of known elements with no more than expected results. *See KSR*, 550 U.S. at 416-17.

F. The Commission's Decision

Contrary to Norgren's argument that the Commission must uphold the decision of the ALJ unless it is clearly erroneous, the Commission "reviews all of the ALJ's findings *de novo*." *Deere & Co. v. Int'l Trade Comm'n*, 605 F.3d 1350, 1358 (Fed. Cir. 2010). Similarly, the Commission's present finding of obviousness is not arbitrary and capricious simply because the Commission found the claims nonobvious before the remand. This court vacated the Commission's obviousness determination in *Norgren I*, allowing the Commission to revisit obviousness. 336 F. App'x at 996. Moreover, the Commission considered new evidence on obviousness following the remand. The Commission's conclusion was not arbitrary or capricious.

III. CONCLUSION

For the foregoing reasons, the judgment of the Commission is affirmed.

AFFIRMED

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On appeal from the United States International Trade
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MOORE, *Circuit Judge*, dissenting.

The majority in this case affirms the holding by the International Trade Commission (Commission) that claims 1-5, 7, and 9 of U.S. Patent No. 5,372,392 ('392 patent) would have been obvious over the SMC prior-art clamp. I dissent because I conclude that the claims would not have been obvious to one of skill in the art in light of the SMC prior-art clamp. In particular, I cannot agree that the SMC prior-art clamp is "a four-sided, generally rectangular clamp." The Final Initial Determination by

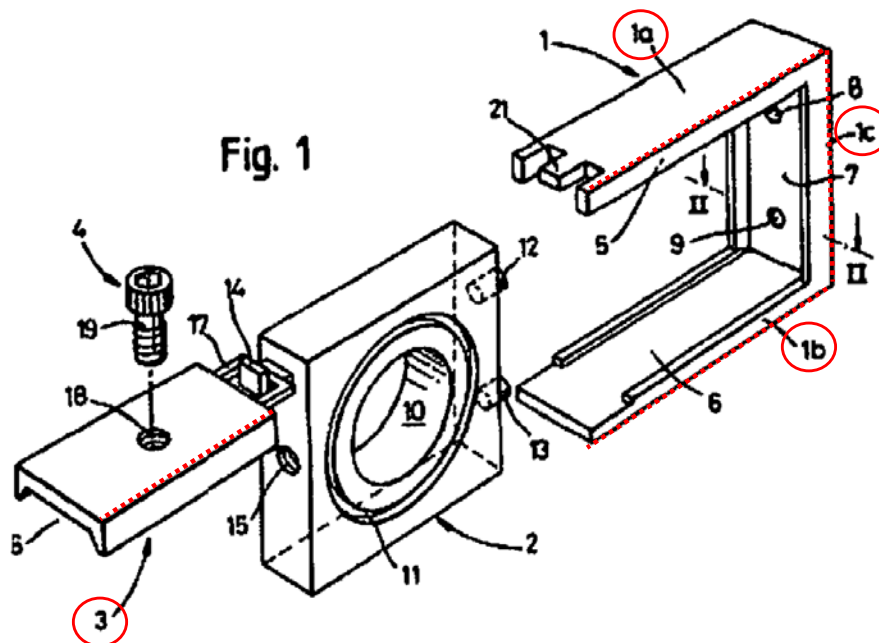
the Administrative Law Judge in this case held that “An examination of [the SMC prior-art clamp] shows that the connector is not generally rectangular, and is not even four sided.” J.A. 321. I agree completely with the determinations by this ALJ and find that the Commission’s findings to the contrary are not supported by substantial evidence.

Claim 1, the only independent claim of the ’392 patent, recites “a *generally rectangular ported flange*” and “a *four-sided, generally rectangular clamp* adapted, in its operative clamping position, to engage, in parallel relationship with one another, [a] pair of ported flanges” ’392 patent claim 1 (emphasis added). In the prior appeal we held that SMC’s ported flange was generally rectangular despite having sloped corners. The picture below depicts the SMC ported flange that we held was generally rectangular:

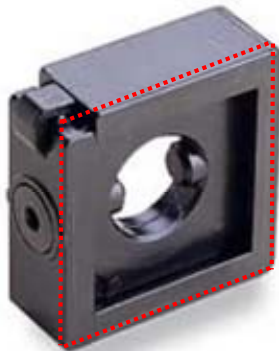


Intervenors’ Br. 13.

The claim language at issue on remand was not “generally rectangular ported flange”; it was “*a four-sided, generally rectangular clamp.*” The ALJ was correct that the focus must be on “the precise claim language”, J.A. 320, namely “*a four-sided, generally rectangular clamp.*” It is clear from figure 1 of the patent what a four-sided generally rectangular clamp is:



'392 patent fig.1 (red lines added). As illustrated in the patent, the clamp is generally rectangular and has four sides. The sides labeled 1a, 1b, and 1c define three sides of the clamp. The side labeled 3 is the fourth side of the clamp and, when the side is pivoted into operative clamping position, the clamp is generally rectangular. The same is true of the commercial embodiment of the '392 patent, the Excelon Quikclamp®:



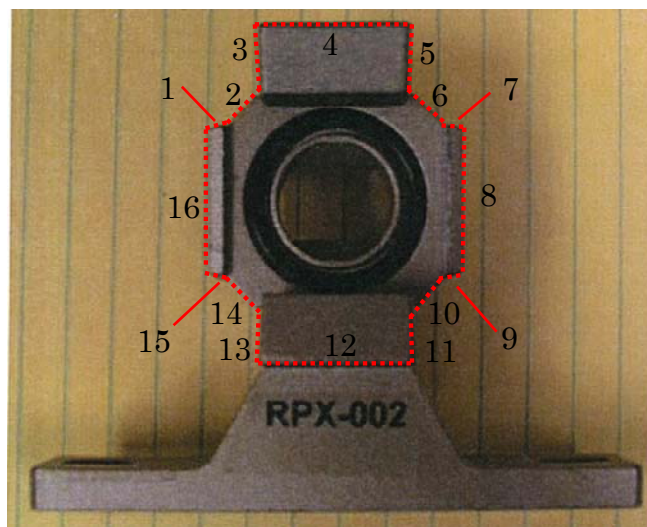
See, e.g., Norgren Excelon Quikclamp, <http://store.norgren.com/us/en/list/airline-preparation-frl/accessories/frl-connectors/> (red lines added).

We must look to the precise claim language and be ever vigilant not to strip away patent rights by eliminating claim limitations. This claim requires the clamp to be both “generally rectangular” and “*four-sided*” in structure. Hence, while something with six sides (like the SMC ported flange pictured above) might be generally rectangular, that does not mean it is “four-sided.” The claim does not require that the flange be four-sided, but it does require that the clamp be “four-sided.” The claim also recites the functional limitation that the clamp must be “adapted, in its operative clamping position, to engage . . . the pair of ported flanges.”

Hence the claims require that the clamp is: (1) four-sided; (2) generally rectangular; and (3) adapted in its operative position to engage the flanges. These are three distinct requirements, three distinct claim limitations. The ALJ clearly understood this. The majority, however, improperly combines the structural and functional claim limitations to conclude that only the *operative* portion of the clamp must be four-sided and generally rectangular.

This interpretation conflicts with the plain language of the claim, which requires that the clamp *as a whole* be “four-sided.” The majority recognizes this requirement: “this court recognizes—consistent with our claim construction in *Norgren I*—that the clamp as a whole, and not merely portions of it, must be four-sided and generally rectangular.” Maj. Op. at 8-9. In application, however, the majority does the opposite. It holds: “the four sides of the old-style SMC connector are those required for its function and that the shape formed by *those sides* is generally rectangular.” Maj. Op. at 10 (emphasis added); *see also* Maj. Op. at 11 (“The four *outer ‘sides’* of the old-style SMC connector are labeled A-D” (emphasis added)). The plain language and our prior case are clear – the whole clamp must be four-sided and generally rectangular, not just a portion of the clamp. It is not fair for the majority to cherry-pick four sides on a sixteen-sided clamp and then call it a four-sided clamp: how can this be clear and convincing evidence of invalidity?

As seen in the photo below (adapted from Intervenor’s Br. 13), the SMC prior-art clamp has sixteen sides:



The ALJ found that “An examination of RPX-002 shows that the connector is not generally rectangular, and is not even four-sided.” J.A. 321. The Commission rejected the ALJ’s findings, instead concluding that the SMC prior art clamp was “generally rectangular.” Though it is certainly true that the claims do not require a perfect rectangle, I do not agree with the Commission that the SMC prior art clamp is generally rectangular. However, given that I review the Commission fact findings for substantial evidence, if the claim limitation was *only* a generally rectangular clamp, I would not reverse on this point. But the claim limitation is NOT “a generally rectangular clamp.” It is a “four-sided, generally rectangular clamp.” I cannot agree that a sixteen-sided clamp is four-sided. It defies logic. And the fact that an expert testifies that a sixteen-sided clamp *is* four-sided doesn’t make it so. I refuse to strip a patentee of his patent rights based on such testimony.

The “four-sided, generally rectangular clamp” limitation is different from both the “generally rectangular flange” limitation and the “adapted, in its operative clamping position” limitation. We should not treat the four-sided limitation as superfluous or read it out of the claim. Because the Commission’s fact finding that the SMC prior art clamp meets the four-sided limitation is not supported by substantial evidence, I would reverse the determination of obviousness.