

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALLSTEEL INC.,
Petitioner,

v.

DIRTT ENVIRONMENTAL SOLUTIONS LTD.,
Patent Owner.

Case IPR2015-01690
Patent 8,024,901 B2

Before SALLY C. MEDLEY, SCOTT A. DANIELS, and
JACQUELINE T. HARLOW, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Allsteel Inc., filed a Petition requesting an *inter partes* review of claims 1–25 of U.S. Patent No. 8,024,091 B2 (Ex. 1001, “the ’901 patent”). Paper 1 (“Pet.”). Patent Owner, DIRTT Environmental Solutions Ltd., filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). We have

jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons that follow, we do not institute an *inter partes* review of claims 1–25 of the ’901 patent.

A. Related Proceeding

The ’901 patent is involved in the following lawsuit: *DIRTT Environmental Solutions Ltd. v. Allsteel Inc.*, No. 1:15-cv-04874 (N. D. Ill.). Pet. 1. IPR2015-01691 involves the same patent and same parties.

B. The ’901 Patent

The ’901 patent relates to a reconfigurable wall system. Ex. 1001, Abstract. The wall system has at least one module having a front and rear surface and vertical end frames disposed on side edges of the module. *Id.* The vertical end frame of one module connects to a vertical end frame of another module through a removable connecting strip. *Id.*

Figure 1 is reproduced below.

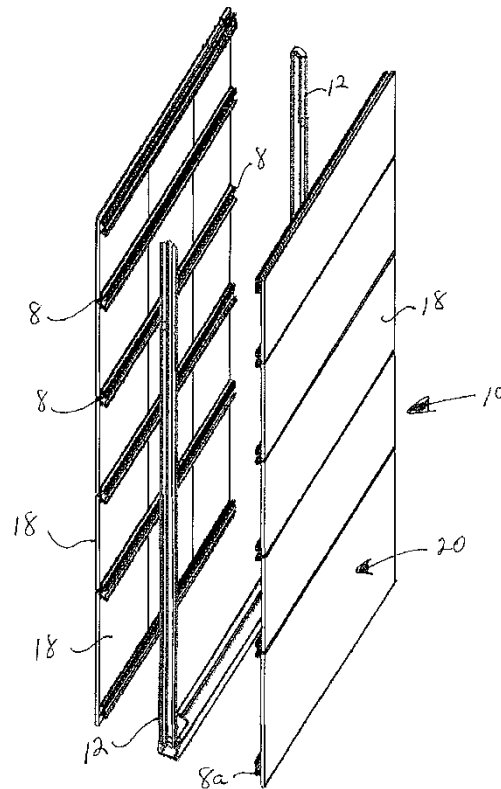


Figure 1 depicts a wall system 10

Figure 1 depicts a wall system 10 made up of one or more wall modules 20. *Id.* at 4:37–38. Each module 20 includes tiles 18, horizontal stringers 8, and a pair of vertical end frames 12. *Id.* at 4:39–45. A more detailed depiction of the vertical end frames is shown in Figure 28 below. In that figure, each vertical end frame 12 includes a pair of flanges 23, where each flange includes a bead 27. Vertical end frames can be connected by “zippers” or connecting strips 25. *Id.* at 5:14–24.

Figure 28 is reproduced below.

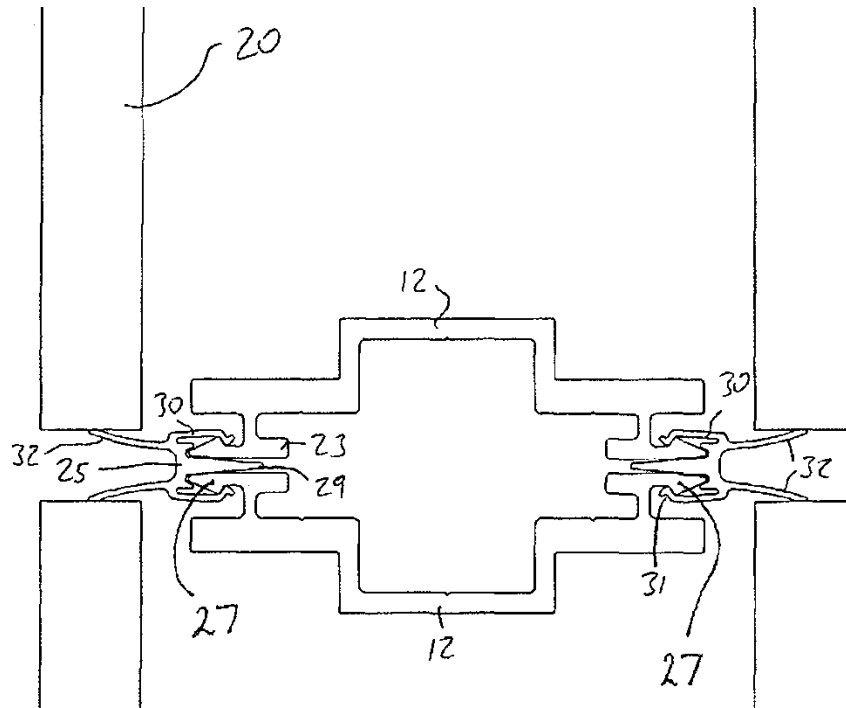


Figure 28 shows a top view of two connected wall modules

Connecting strip 25 includes central spine 29 that fits between flanges 23 and a pair of arms 30 on opposite sides of the spine. *Id.* at 5:24–27. Each arm includes a bead 31 that snap fits with beads 27 on flanges 23 for a secure releasable connection. *Id.* at 5:27–29.

C. Illustrative Claim

Claim 1 is the sole independent claim and is reproduced below.

1. A movable reconfigurable wall system comprising:
 - a) at least one wall module having a front and rear surface and top, bottom, right side and left side edges, said at least one wall module having:
 - i) a vertical end frame disposed adjacent to each of said right and left side edges, each vertical end frame having a first vertically extending flange and a spaced apart second vertically extending flange thereon, each of said first vertically extending flange and said second vertically

extending flange having a beaded portion, the beaded portion on one of said first vertically extending flange or said second vertically extending flange extending toward the front surface of the wall module and the beaded portion on the other of said first vertically extending flange or said second vertically extending flange extending toward the rear surface of the wall module;

ii) a plurality of horizontal stringers affixed between said vertical end frames at said right and left side edges; and
iii) an aesthetic surface affixed to said stringers; and

- b) a removable connecting strip having a pair of spaced apart flexible arms, each arm having a beaded portion thereon, the beaded portion of one of said arms being adapted to connect releasably to the beaded portion of one of said first vertically extending flange or said second vertically extending flange on said vertical end frame and the beaded portion of the other of said arms being adapted to connect releasably to the beaded portion of a corresponding opposed vertically extending flange on a separate vertical end frame of a second wall module, a wall bracket, a finishing trim or a connection post to hold one of said first vertically extending flange or said second vertically extending flange and said opposed vertically extending flange together, the beaded portions of said first vertically extending flange or said second vertically extending flange and said opposed vertically extending flange fitting inside the arms of said connecting strip to hold said first vertically extending flange or said second vertically extending flange and said opposed vertically extending flange together thereby releasably connecting said at least one wall module to the other of said second wall module, wall bracket, finishing trim or connection post.

Ex. 1001, 9:45–10:21.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–25 are unpatentable based on the following grounds:

References	Basis	Challenged Claims
Price ¹	§ 103(a)	1–5, 11, and 13
Price and EVH ²	§ 103(a)	6, 7, and 18
Price and Yu ³	§ 103(a)	8 and 9
Price and MacGregor ⁴	§ 103(a)	10 and 19–23
Price and Raith ⁵	§ 103(a)	16 and 17
Price and Rozier ⁶	§ 103(a)	12
Price, MacGegor, and Rozier	§ 103(a)	25
Price and Dixon ⁷	§ 103(a)	14
Price, EVH, and KI Brochure ⁸	§ 103(a)	15
Price and De Lange ⁹	§ 103(a)	24

¹ Canadian Patent No. 2,002,674, published March 2, 1993 (Ex. 1002) (“Price”).

² Publicly available file contents for U.S. Application 10/027,872, published as US 2002/0121056, and made publicly available Sep. 5, 2002 (Ex. 1004) (“EVH”).

³ U.S. Patent No. 6,161,347, issued Dec. 19, 2000 (Ex. 1005) (“Yu”).

⁴ U.S. Patent Publication No. 2003/0154673 A1, published Aug. 21, 2003 (Ex. 1006) (“MacGregor”).

⁵ U.S. Patent No. 4,438,614, issued Mar. 27, 1984 (Ex. 1003) (“Raith”).

⁶ U.S. Patent No. 5,881,979, issued Mar. 16, 1999 (Ex. 1007) (“Rozier”).

⁷ U.S. Patent No. 4,277,920, issued Jul. 14, 1981 (Ex. 1008) (“Dixon”).

⁸ Genius Full-Height Movable Walls Brochure, 2003 (Ex. 1009) (“KI Brochure”).

⁹ U.S. Patent No. 3,621,635, issued Nov. 23, 1971 (Ex. 1010) (“De Lange”).

II. ANALYSIS

A. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1277–1279 (Fed. Cir. 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,”¹⁰ and “the standard was properly adopted by PTO regulation.”). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes a construction for “horizontal stringer.” Pet. 9. Patent Owner disagrees with Petitioner’s construction for horizontal stringer and proposes its own construction for that term. Prelim. Resp. 8–10. The parties do not propose any other construction for any other term. For purposes of this Decision, we need not construe any limitations of the challenged claims.

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the

¹⁰ Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (“AIA”).

invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

The level of ordinary skill in the art is reflected by the prior art of record. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

C. Asserted Grounds of Obviousness of Challenged Claims over Price

Petitioner contends that claim 1 is unpatentable under 35 U.S.C. § 103(a) as obvious over Price and the remaining challenged claims that depend from claim 1 (claims 2-25) are obvious over Price alone or Price and various other prior art. Pet. 10–57. To support its contention that claim 1 is unpatentable, Petitioner provides explanations as to how Price meets the claim 1 limitations. *Id.* at 10–24. Petitioner also relies upon a Declaration of Joseph J. Beaman, Jr., who has been retained as an expert witness by Petitioner for the instant proceeding. Ex. 1018.

Price describes a sandwich panel unit for use in a partition wall and to a wall assembly incorporating a plurality of sandwich panel units. Ex. 1002, 2.

Figure 3 is reproduced below.

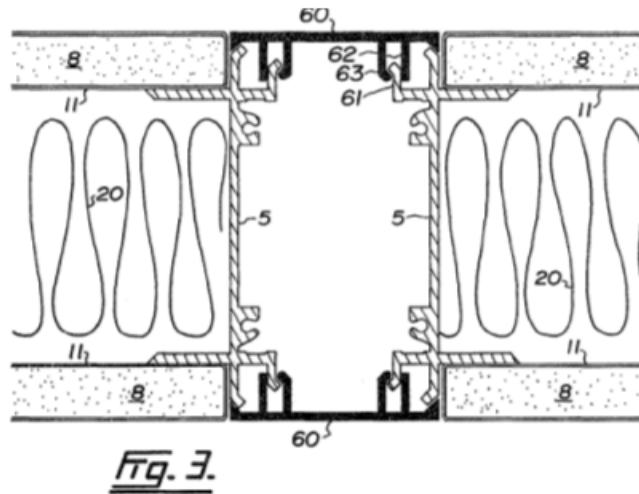


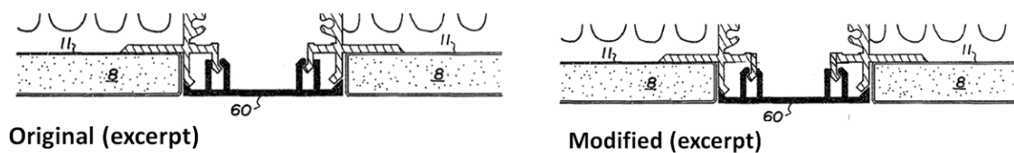
Figure 3 of Price shows a top plane view of two connected panels

Figure 3 of Price describes a jointer member 60 for connecting two panels 8. *Id.* at 15. Frame side members 5 are formed with bayonet members 61. Jointer member 60 has inwardly projecting members 62 and 63, which form sockets that snap onto the bayonet members 61 to hold the panels 8 together. *Id.*

Claim 1 requires a connecting strip with a pair of spaced apart arms. Claim 1 also requires each arm of the connecting strip as “having a beaded portion thereon.” Petitioner relies on Price’s jointer member 60 having arms 63 (with bead thereon) (*see, e.g.,* Price Fig. 3 above) to meet the connecting strip limitation. Pet. 15–16. Petitioner recognizes, however, that Price does not describe “the beaded portions of said first vertically extending flange or said second vertically extending flange and said opposed vertically extending flange *fitting inside the arms of said connecting strip.*” *Id.* at 17–20. (Emphasis added). Rather, as shown in Figure 3 of Price reproduced above, and as acknowledged by Petitioner, beaded portions of bayonet members 61 (e.g., claim 1 vertically extending flanges) fit *outside* arms 63

of jointer member 60 as opposed to inside arms 63 as claimed. *Id.*

Petitioner contends that a person of ordinary skill in the art at the time of the invention would have found it obvious to reverse the positions of bayonet members 61 to fit inside inwardly projecting members 63 of jointer member 60 in a snap-fit relation. *Id.* at 18. This concept is illustrated at page 19 in the Petition showing an original and modified version of Price and is reproduced below.



Despite Petitioner’s characterization that the modification is a mere reversal of parts, the proposed modification results in the repositioning and rotating of projecting member 63 with the “bead” on its end outside rotated bayonet member 61, as shown above to meet the claim language. Petitioner argues that modifying in this way would have been obvious, directing attention to the Declaration testimony of Mr. Beaman, who testifies that it would have been obvious to reverse the inwardly projecting members of the jointer member 60 of Price such that the beaded portions fit inside the arms of bayonet members. Ex. 1018 ¶ 219. Claim 1 requires the beaded portion of the flange (e.g., beaded portion of bayonet member 61) to fit *inside* the arms of the connecting strip (e.g., projecting member 63), not the other way around as Mr. Beaman asserts. Moreover, we have considered Mr. Beaman’s testimony that the modification shown above would have been obvious. That testimony is reproduced here.

220. For all intents and purposes, such a modification would result in a snap fit connection that predictably works in the same way as the unmodified original. One is simply a mirror

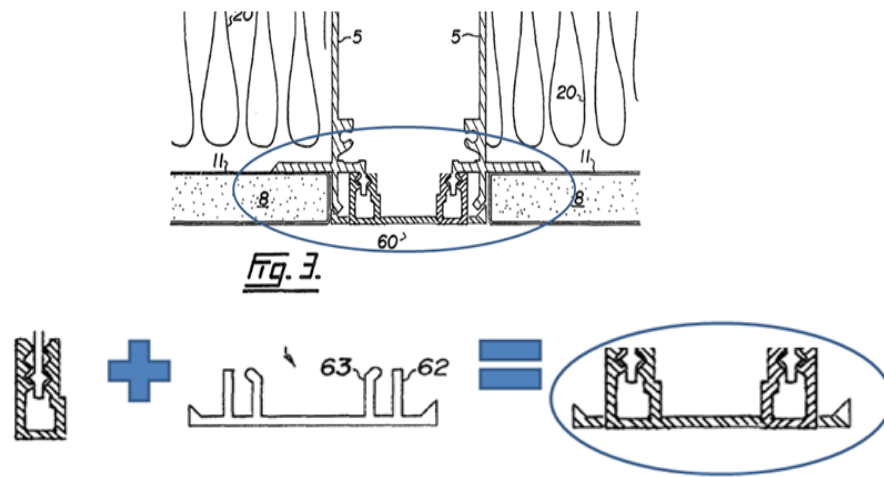
image of the other. A person of skill would recognize that, from a functional perspective, the original and modified arrangements are exactly the same and either could be selected as a matter of mere design preference. There is no criticality to the position of the beaded portions according to the claims, nor would there have been any significant engineering obstacle to reversing those positions. In fact, by having the flanges on the frame side members point inwardly according to the modification proposed above, there would likely be less of a snagging or pinching concern for installers of the panels.

Id. ¶ 220.

We do not give much weight to the above testimony because it is conclusory. 37 C.F.R. § 42.65(a). Mr. Beaman does not provide a factual basis for his conclusion that the snap fit connection would work in the same manner as the original arrangement, or that there likely would be less of a snagging or pinching concern for installers as asserted. For example, we would want to know that the rearranging of so many parts would result in (1) the arms “being adapted to *connect releasably* to the beaded portion of one of said first vertically extending flange” and (2) “releasably connecting” one wall module to another as claimed, an explanation of which is missing from the Petition and Mr. Beaman’s testimony.

We also are not persuaded by Petitioner’s assertions that the modification would have been obvious, because Petitioner does not provide a sufficient factual basis for the rationale for making the modification. In that regard, Mr. Beaman does not provide a sufficient basis for us to conclude that the modification would reduce snagging or pinching for installers. He does not explain what he means by this, or how the modification would have led to the alleged improvement. Indeed, if the

Petitioner proposes to use the above horizontal portions 52 and 53, with ratchet-type teeth 54, to engage bayonet 50 in substitution of the jointer member 60 and bayonet members 61 shown in Figure 3 for connecting two wall units together. This concept is illustrated at page 20 in the Petition showing the proposed modification to Price and is reproduced below.



In essence, Petitioner proposes to orient the horizontal ratchet-type teeth 54 of Figure 2 vertically and replace the bayonet of Figure 3 with the bayonet of a different shape from Figure 2. Petitioner argues that it would have been obvious to modify the socket-bayonet arrangement between the jointer members 60 and side members 5 with the socket-bayonet arrangement between the alignment members 43 and ceiling track 42 to provide a ratchet type connection between the jointer and side member. Pet. 19–20. We have considered Mr. Beaman’s testimony to which we are directed. Mr. Beaman testifies that the various socket-bayonet arrangements disclosed in Price could be used interchangeably, and that a person of ordinary skill in the art would have been motivated to make the interchange

because standardizing the types of connections in the Price wall system would result in cost reductions. Ex. 1018 ¶¶ 222–223.

We do not give much weight to Mr. Beaman’s testimony because it is conclusory. 37 C.F.R. § 42.65(a). Mr. Beaman does not provide a factual basis for his conclusion that the various socket-bayonet arrangements disclosed in Price could be used interchangeably. Price’s ratchet-type teeth connection with bayonet appears quite different from its jointer member 60 arrangement. We don’t know, for example, how the ratchet-type teeth connection to bayonet would result in (1) the arms “being adapted to *connect releasably* to the beaded portion of one of said first vertically extending flange” and (2) “releasably connecting” one wall module to another as claimed. An explanation is missing from the Petition and Mr. Beaman’s testimony in that regard.

We also are not persuaded by Petitioner’s assertions that the modification would have been obvious, because Petitioner does not provide a sufficient factual basis for the rationale for making the modification. In that regard, Mr. Beaman does not provide a basis for us to conclude that the modification would lead to cost reductions. He does not explain what he means by this, or how the modification would lead to cost reductions. If anything, having more edges from the ratchet-type teeth would appear to us to result in more manufacturing costs, not less.

For the above reasons, we are not persuaded that either proposed modification to Price meets all of the limitations. Nor are we persuaded by Petitioner’s rationale that either proposed modification would have been obvious to a person of ordinary skill in the art at the time of the invention.

We are not persuaded that Petitioner has established a reasonable likelihood that Petitioner would prevail in its challenge to claim 1 or claims 2–25 which depend from claim 1.

III. CONCLUSION

For the foregoing reasons, we determine that there is not a reasonable likelihood that Petitioner would prevail in showing that claims 1–25 of the '901 patent are unpatentable.

IV. ORDER

For the foregoing reasons, it is

ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

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