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Paper 8
Date: November 21, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GUARDIAR SOLUTIONS, INC.,
Petitioner,

v.

RSA PROTECTIVE TECHNOLOGIES, LLC,
Patent Owner.

IPR2019-01161
Patent 8,215,865 B2

Before BARRETT, KEN B., PINKERTON, JOHN P., and JAMES J. MAYBERRY, *Administrative Patent Judges.*

MAYBERRY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background and Summary

Petitioner, Guardiar Solutions, Inc., filed a Petition ("Pet.") requesting *inter partes* review of claims 1–35 (the "Challenged Claims") of U.S. Patent No. 8,215,865 B2 (Ex. 1001, the "'865 patent"). Paper 1. Patent Owner, RSA Protective Technologies, LLC, filed a Preliminary Response ("Prelim.

Resp.") to the Petition. Paper 6. We have authority under 35 U.S.C. § 314. *See also* 37 C.F.R. § 42.4(a) (permitting the Board to institute trial on behalf of the Director).

To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we do not institute an *inter partes* review.

B. Real Parties in Interest

Petitioner identifies itself and Guardiar Corporation, Guardiar USA LLC, Guardiar Europe BVBA, Guardiar South Africa (Pty) Ltd., Praesidiad Group Limited, and Praesidiad Limited as real parties-in-interest. Pet. 1.

C. Related Matters

Petitioner states that the '865 patent is the subject of litigation in the U.S. District Court for the Southern District of Florida in a case styled *RSA Protective Technologies, LLC v. Secure USA, Inc. and Guardiar Solutions Inc.*, Case No. 9:18-cv-81124-RLR (S.D. Fla.). Pet. 1. Petitioner also identifies two lawsuits in the U.S. District Court for the Southern District of New York involving the '865 patent, in cases styled *RSA Protective Technologies, LLC v. MFM Contracting Corp.*, Case No. 1:18-cv-09696-JGK (S.D.N.Y.) and *RSA Protective Technologies, LLC v. Port Authority of N.Y.*, Case No. 1:18-cv-09960-UA (S.D.N.Y.). *Id.* at 1–2. Patent Owner confirms these three proceedings and does not identify any additional matters related to the '865 patent. Paper 4, 1.

D. The '865 Patent

The '865 patent, titled "Anti-Ram System and Method of Installation," issued July 10, 2012 from an application filed January 27, 2010. Ex. 1001, codes (54), (45), (22). The '865 patent is directed "to the assembly and installation of bollard systems for use in protecting building and other structures from being rammed by vehicles." *Id.* at 1:40–42. We reproduce Figure 3 from the '865 patent below.

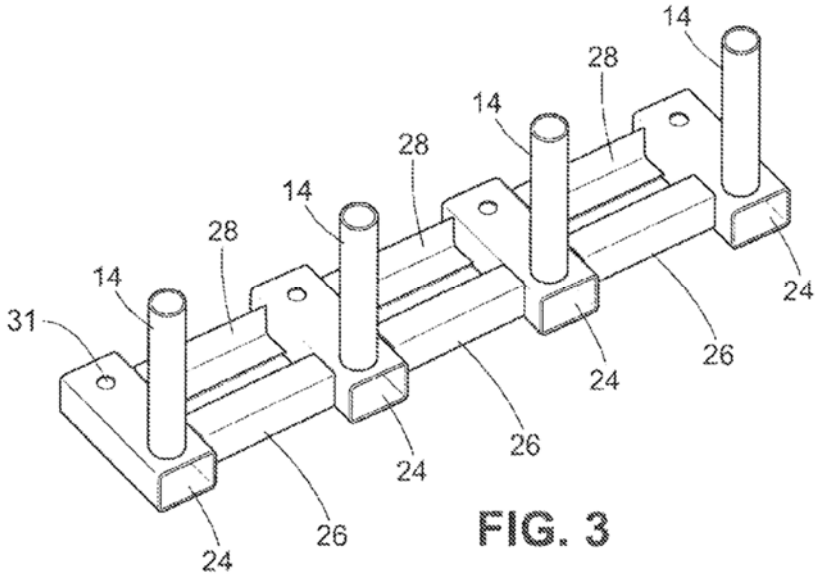

FIG. 3

Figure 3 depicts "an embodiment of th[e] invention with four bollards mounted on the framework for the pad or base of the anti-ram system." Ex. 1001, 6:1–3. Bollards 14 are mounted on framework 23 for the base, which includes transversely-extending tubular members 24, longitudinally-extending tubular members 26, and longitudinally-extending angular members 28. *Id.* at 7:51–55. Apertures 31 allow the tubular members to be filled with concrete or other material to add strength and weight to the base. *Id.* at 8:7–10. A rebar cage may be added to the base framework. *Id.* at 8:11–16, Fig. 4.

With the bollard system of the '865 patent, "the striking forces from the crash vehicle are transmitted from the bollard down to the shallow mount pad (5[inches] to 14[inches] in depth) in a way that is different from standard deep trench foundations (4[feet] to 6[feet])." Ex. 1001, 2:42–45. Also, "[t]he shallow base system makes for a much more effective and efficient load transfer into the soil which reduces the overall volume of displacement of soil by the base, as compared to the standard deep trench foundation systems." *Id.* at 2:49–52. "In the shallow mount bollard system of [the '865 patent], the resistive forces are all at the base of the bollard (at the top of the trench) and therefore reduce the likelihood of the bollard rotating and vehicle breaching the security system." *Id.* at 2:60–64.

E. Illustrative Claims

Of the Challenged Claims, claims 1, 16, and 33 are independent claims. Claim 1, reproduced below, is representative.

> 1. A bollard structure comprising:
> at least one bollard; and
> a base comprising opposed ends and a plurality of structural members which intersect and are tied together, for each bollard of the bollard structure at least one first structural member extending from a first of the opposed ends of the base to a second of the opposed ends of the base in a first direction intersecting with the opposed ends, and at least one structural member extending to intersect with the at least one first structural member;
> each bollard being secured to at least one of the at least one first structural member and the at least one structural member of the base for the respective bollard and extending upwardly from the base so as to transmit forces applied to the at least one bollard to the base;
> wherein the base is configured to be mounted in a shallow excavation with the at least one bollard extending above grade; and

> wherein the at least one first structural member or the at least one structural member or both are configured or tied together to retain within the base supporting media introduced into the base when the base is mounted in the excavation such that the rotation is resisted of a bollard or bollards and the base from an impact against the bollard or bollards.

Ex. 1001, 9:17–41. Claim 16 is similar to claim 1 and recites "a plurality of bollards." *Id.* at 10:5–31. Claim 33 is similar to claims 1 and 16, but adds the requirement that "at least one of the plurality of members that extend parallel to the ends of the base extending between a structural member to which a first bollard is secured and a structural member to which a second bollard adjacent to the first bollard is secured." *Id.* at 11:8–12:13.

F. Prior Art and Asserted Grounds

Petitioner asserts that the Challenged Claims would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	References
1–4, 15–20, 31–35	103	Kogyo[1] and Carlyle[2]
5–14, 21–30	103	Kogyo, Carlyle, and Cold-Formed Steel Design[3]
1–4, 15–20, 31–35	103	Kogyo, Hill[4], and Carlyle
5–14, 21–30	103	Kogyo, Hill, Carlyle, and Cold-Formed Steel Design
35	103	Kogyo, Hill, Carlyle, and Glaesener[5]

[1] Kogyo, JP Unexamined Pat. App. Pub. H11-61746, published Mar. 5, 1999 (Ex. 1007). Exhibit 1008 provides an English translation of Kogyo, to which we refer in this Decision. Ex. 1009 provides a declaration attesting to the translation.
[2] Carlyle, GB 2229472 A, published Sept. 26, 1990 (Ex. 1011).
[3] Yu, "Cold-Formed Steel Design," John Wiley & Sons, Inc. (3d ed.), published June 12, 2000 (Ex. 1015, "Cold-Formed Steel Design").
[4] Hill, GB 2282838 A, published Apr. 19, 1995 (Ex. 1012).
[5] Glaesener, US 3,881,697, issued May 6, 1975 (Ex. 1013).

The following subsections provide a brief description of the asserted prior art references.

1. Kogyo

Kogyo, titled "Energy-Absorbing Guard Block Support Structure," published March 5, 1999. Ex. 1008, codes (54), (43). Kogyo "relates to a support structure for installation and support of guard blocks to prevent improper ingress of vehicles onto road surfaces." *Id.* ¶ 1. We reproduce Kogyo's Figures 1 and 2, below.

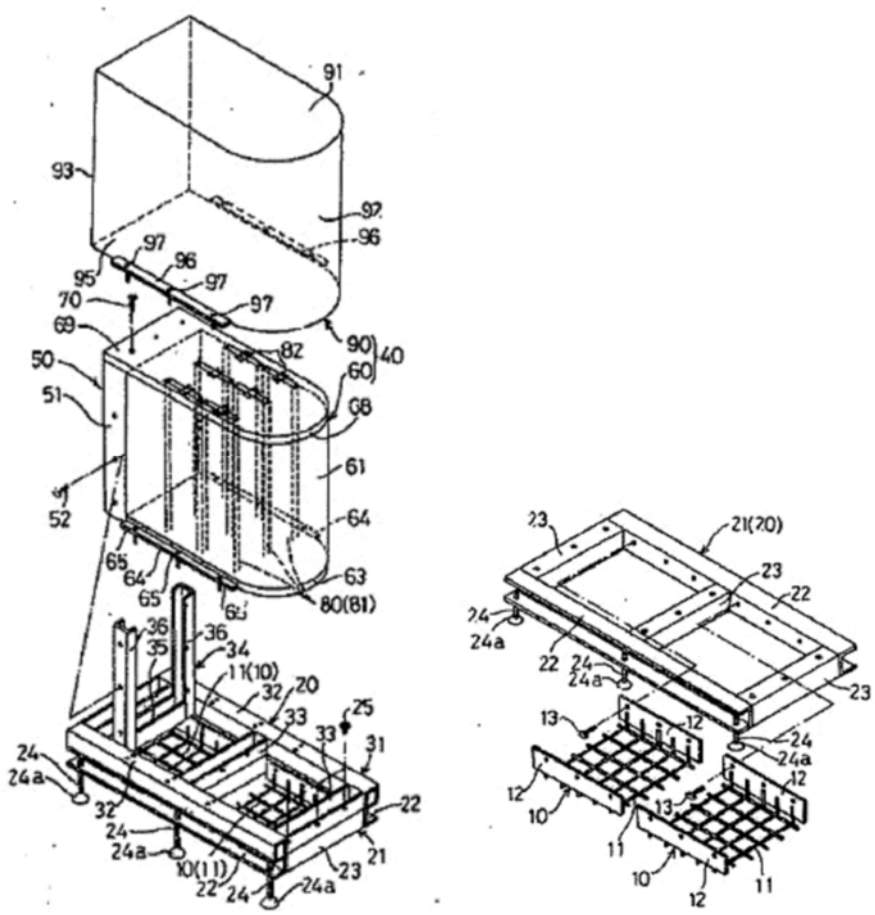

Figure 1, at the left, above, depicts "an exploded isometric view of the energy-absorbing guard block and the mounting base therefor" and Figure 2 depicts "an isometric view showing the first base of the mounting base" of the embodiment of Figure 1. Ex. 1008, 20, 23–28 ("Brief Description of the

Drawings"). Mounting base 20, which includes first base 21 and second base 31 is recessed below the surface of a road. *Id.* ¶ 12. First base 21 includes a rectangular framework with longitudinal frame members 22 and transverse frame members 23. *Id.* ¶ 13. Second base 31 is removably connected to first base 21 and includes longitudinal frame members 32 and transverse frame members 33. *Id.* ¶ 15.[6] Support column frame 24 is removably attached to frame members 32 of second base 31 and includes left and right support columns 36. *Id.* Guard block 40, which includes inner body 60, outer body 90, and support member 50, is removably installed on mounting base 20 and specifically, the top surface of second base 31. *Id.* ¶ 16.

First base 21 is set on a recessed foundation and covered in concrete to the top surface of first base 21. Ex. 1008 ¶ 24. Second base 31 is then bolted to first base 21. *Id.* at ¶ 25. Column frame 34, including left and right support columns 36 is then fixed to the rear portion of the second base 31, and support member 50 is fixed to support columns 36. *Id.* Next, inner body 60 is removably fixed to the top surface of second base 31. *Id.*

2. Carlyle

Carlyle, titled "Retractable Barrier Post Assembly," published September 26, 1990. Ex. 1011, codes (54), (43). Carlyle relates to "a security barrier device of a type which can be readily moved into position to

[6] Paragraph 15 of the English translation of Kogyo identifies the structural members of second base 31 as members 22 and 23, but subsequent text in paragraph 15 and other paragraphs, as well as Figure 1, makes it clear that the members of second base 31 are numbered 32 and 33. *See* Ex. 1008 ¶¶ 15, 22, 23, 32, Fig. 1; *see also* Pet. 43 ("[S]econd base 31 includes frame members 32 and 33.").

prevent a vehicle entering a prohibited area." *Id.* at 1. We reproduce Carlyle's Figure 1, below.

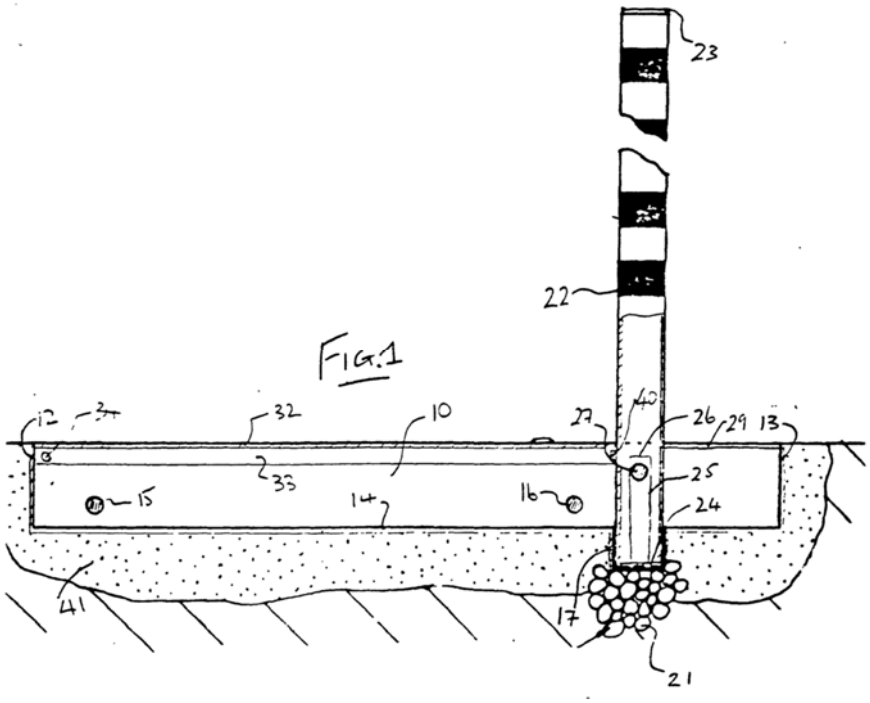

Figure 1 depicts "a longitudinal vertical cross section view of a security barrier device according to [Carlyle's] invention." Ex. 1011, 4. Relevant to this proceeding, Carlyle's retractable barrier post is installed within a shallow excavation. *See id.* at 6–7, Fig. 1.

3. Cold-Formed Steel Design

Exhibit 1014 provides excerpts from "Cold-Formed Steel Design," which appears to be a textbook or similar reference book. *See* Ex. 1014. The excerpts provide information about cold-formed steel structural members. *See id.* The reference was published June 12, 2000. Ex. 1015, 1 (providing a print out of the Copyright Catalog entry for the reference).

4. Hill

Hill, titled "Retractable Traffic Control Barrier," published on April 19, 1995. Ex. 1012, codes (54), (43). Hill is directed to a traffic barrier that,

when in use, provides an obstacle to vehicles. *Id.* at 2. We reproduce Hill's Figure 3, below.

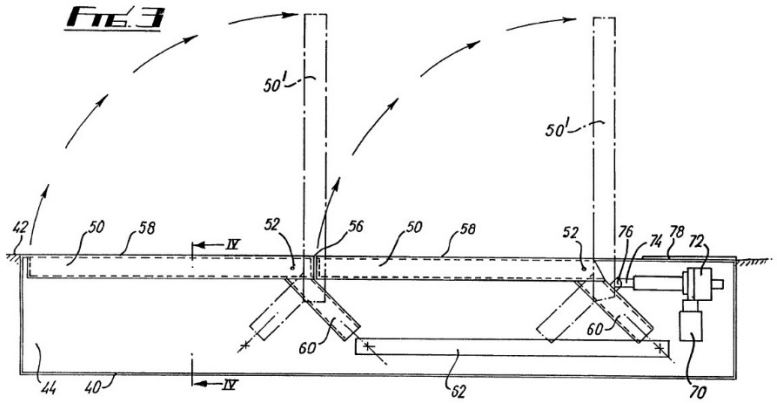

Figure 3 depicts a sectional cross-section of a traffic control arrangement. Ex. 1012, 5. Relevant to this proceeding, the arrangement depicted in Figure 3 shows two arms 50 used as traffic control barriers, that is, a plurality of barriers.

5. Glaesener

Glaesener, titled "Roadside Safety Apparatus," issued May 6, 1975. Ex. 1013, codes (45), (54). Glaesener relates to "a safety system for protecting moving traffic against impact with stationary roadside objects." *Id.* at 1:4–6. Relevant to this proceeding, Glaesener discloses that, in an embodiment of the safety system, its barrier (post 15) may include a reinforcement structure. *Id.* at 4:1–4; Fig. 5.

II. ANALYSIS

A. Applicable Law

Petitioner's five asserted grounds of unpatentability are each based on obviousness under 35 U.S.C. § 103(a).

> Section 103(a) [of 35 U.S.C.] forbids issuance of a patent when "the differences between the subject matter sought to be patented

> and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

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;[7] and (4) when available, objective evidence, such as commercial success, long felt but unsolved needs, and failure of others.[8] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

"[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine" teachings from multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) ("The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact."). We recognize that, "[e]ven under [the] 'expansive and flexible' obviousness analysis [of *KSR*], we must guard against 'hindsight bias' and '*ex post* reasoning.'" *St. Jude Med., Inc. v.*

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[7] We address the level of ordinary skill in the art in Section II.B., below.
[8] Petitioner states that "simultaneous invention . . . is . . . an objective indication that the system arrived at was obvious." Pet. 16. Petitioner does not explain how we should weigh this evidence in relation to the other underlying factual considerations, nor does Petitioner provide a limitation-by-limitation analysis demonstrating simultaneous invention. *See id.* at 7–17; *see also* Prelim. Resp. 42–52 (addressing simultaneous invention).

Access Closure, Inc., 729 F.3d 1369, 1381 (Fed. Cir. 2013) (citation omitted).

B. Level of Ordinary Skill in the Art

The level of skill in the art is "a prism or lens" through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Petitioner contends that a person having ordinary skill in the art:

> would have at least a bachelor's degree or a technical degree in a field such as mechanical or civil engineering or physics and at least several years of experience in designing or manufacturing vehicle barrier systems, but numerous years of experience in the design or manufacture of vehicle barriers, particularly anti-ram systems, could substitute for formal education.

Pet. 31 (referencing Ex. 1003 ¶¶ 71–76 (providing Mr. Roland's testimony regarding the level of ordinary skill in the art)). Patent Owner does not dispute this characterization of the level of ordinary skill in the art. Prelim. Resp. 18. For the purposes of this Decision, we accept Petitioner's characterization of the level of ordinary skill in the art, which we find is consistent with the level of skill reflected in the prior art of record.

C. Claim Construction

In *inter partes* reviews, we interpret a claim "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b)." *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,343 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)). Under this standard, we construe the claim "in accordance with the ordinary and customary meaning of such claim as

understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." *Id.* Only claim terms that are in controversy need to be construed and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Petitioner informs the Board that, in co-pending litigation, the District Court issued a claim construction order. Pet. 31; *see* Ex. 1026 (providing the claim construction order). Petitioner asserts that these constructions should be applied in this proceeding. Pet. 31–32; *cf.* 83 Fed. Reg. at 51,358 ("Any prior claim construction determination concerning a term of the claim in a civil action . . . that is timely made of record in the *inter partes* review proceeding will be considered."). Patent Owner does not dispute Petitioner's assertion. Prelim. Resp. 18.

We note that, for the nine disputed claim terms construed by the District Court, the court adopted the purported plain and ordinary meaning of the claim term. Ex. 1026, 4–17. We also apply the plain and ordinary meaning to these terms, as that meaning would have been understood by a person having ordinary skill in the art at the time of the invention, when read in context of the Specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention . . . in the context of the entire patent, including the specification."). We determine, for the purposes of this Decision, that none of the terms require an express construction here to resolve the parties' dispute. *See Nidec Motor Corp.*, 868 F.3d at 1017.

D. Ground 1: Claims 1–4, 15–20, and 31–35 as Allegedly Obvious Over Kogyo and Carlyle

Petitioner contends that claims 1–4, 15–20, and 31–35 are rendered obvious by Kogyo and Carlyle. Pet. 37, 40–69.

1. Independent claim 1

Independent claim 1 generally recites the structural elements of a claimed bollard structure. Ex. 1001, 9:17–41. Important to our analysis of this claim, certain of the structural elements—namely, at least one *first* structural member and at least one structural member—are recited in multiple elements of the claim. *See, e.g., id.* at 9:25–26 (reciting "at least one structural member extending to intersect with the at least one first structural member"). Our analysis of Petitioner's contentions with respect to claim 1 focuses on the requirements for these two structural elements as recited throughout claim 1.

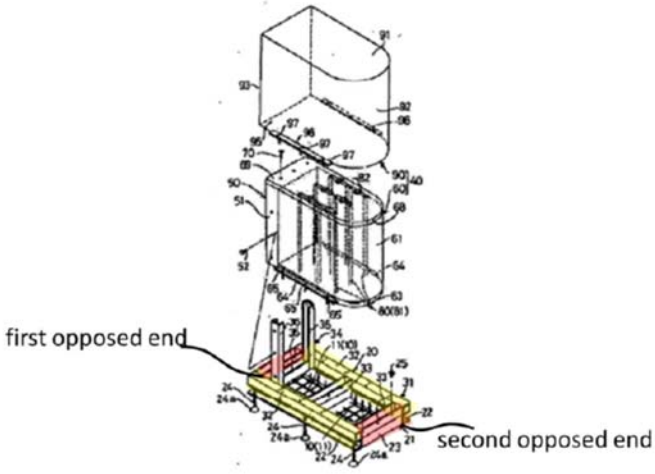
a) Petitioner's contentions with respect to the "base" limitation of claim 1

Claim 1 recites, in relevant part, "a base comprising opposed ends" and "a plurality of structural members which intersect and are tied together." Ex. 1001, 9:19–20 (the "opposed ends" and "plurality of structural members" requirements of the "base" limitation). This limitation also recites, "for each bollard of the bollard structure at least one first structural member extend[s] from a first of the opposed ends of the base to a second of the opposed ends of the base in a first direction intersecting with the opposed ends." *Id.* at 9:20–25 (the "first structural member" requirement of the "base" limitation). Finally, this limitation requires "at least one structural member extending to intersect with the at least one first structural member." *Id.* at 9:25–26 (the "one structural member" requirement of the "base"

limitation). Petitioner contends that Kogyo discloses this subject matter of the "base" limitation. Pet. 43–49. We analyze the Petitioner's contentions with respect to the four requirements identified above.

(1) The "opposed ends" and "plurality of structural members" requirements of the "base" limitation

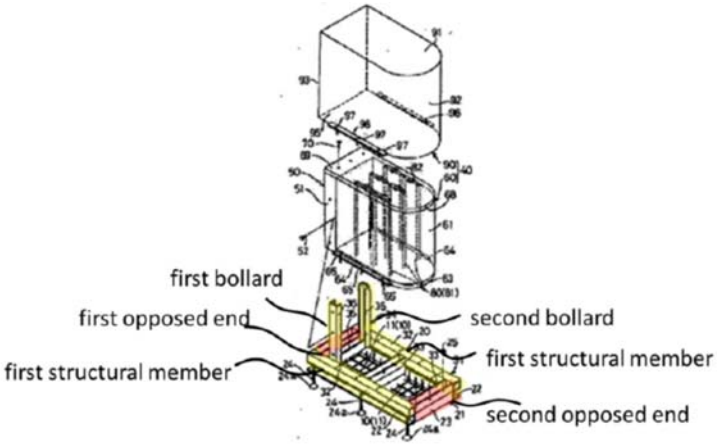
Petitioner contends that Kogyo discloses base 20, which includes first base 21 and second base 31. Pet. 43. Petitioner continues that "[f]irst base 21 includes frame members 22 and 23, and second base 31 includes frame members 32 and 33." *Id.* Petitioner adds that "frame members 23 and 33 are located at the opposed ends of the base" and "[f]rame members 22 and 32 are transverse to frame members 23 and 33, joining each other where they meet." *Id.* Petitioner concludes that "frame members 22 and 32 intersect and are tied together with members 23 and 33." *Id.* (referencing Ex. 1003 ¶¶ 123–124). To illustrate its position, Petitioner provides an annotated version of Kogyo's Figure 1, which we reproduce below.



Pet. 44. The annotated figure shows an exploded isometric view of Kogyo's energy-absorbing guard block and base, with first and second opposed ends identified, and with members 22 and 32 colored in yellow and members 23 and 33 colored in red.

(2) The "first structural member" requirement of the "base" limitation

Petitioner contends that structural support columns 36 represent two bollards. Pet. 42–43. For the purposes of this Decision, we accept that contention. Petitioner also contends that, for each of the support columns 36, "there is a first structural member (frame 22 or 32) extending from a first opposed end of the base 20 to a second opposed end." *Id.* at 47. To illustrate this position, Petitioner provides an annotated version of Kogyo's Figure 1, which we reproduce below.



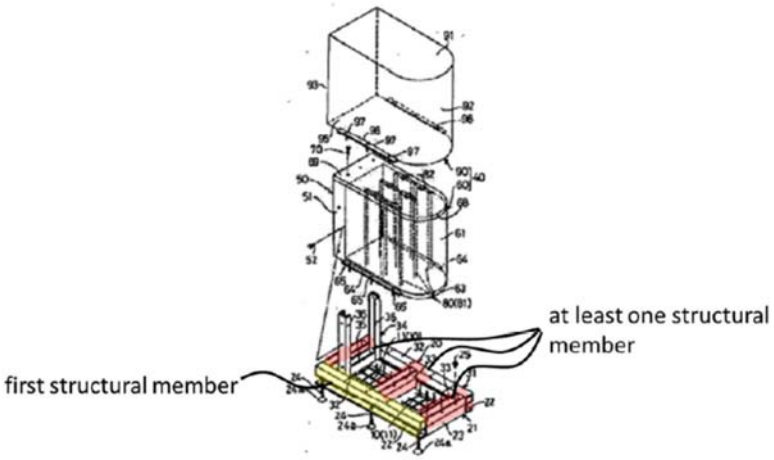
Id. The annotated figure shows an exploded isometric view of Kogyo's energy-absorbing guard block and base, with first and second opposed ends identified, and with members 22 and 32 and columns 36 (identified as a first and second bollard) colored in yellow and members 23 and 33 colored in red. The annotation also includes labels for the first structural member.

The Petitioner also contends that "first structural members (frame 23 or 33) are transverse to the frame members 22 or 32, and therefore lie in a direction that is 'intersecting' with the opposed ends." Pet. 48 (referencing Ex. 1008 ¶ 13; Ex. 1003 ¶ 138). We note that this contention identifies frame members 23 or 33, rather than frame members 22 or 32 as previously identified, as the "first structural members." Mr. Roland's Declaration

similarly identifies frame members 22 or 32 and frame member 23 or 33 as the "first structural member"). Ex. 1003 ¶¶ 137, 138. As we note below in our analysis of the "one structural member" requirement of the "base" limitation, Petitioner apparently intends for member 32 to correspond to the "first structural member," as Petitioner identifies member 33 as the "one structural member."

(3) The "one structural member" requirement of the "base" limitation

Petitioner contends that "Kogyo's base includes at least one structural member 33 that 'extend[s] to intersect with' the at least one first structural member 32." Pet. 49; *see also id.* ("Accordingly, Kogyo teaches at least one structural member (transverse frame member 33) extending to intersect with the at least one first structural member (longitudinal frame member 32)."). Petitioner adds that "[t]he at least one structural member can be the middle transverse frame member, or it can be either transverse frame member located at the opposite ends." *Id.* To illustrate its position, Petitioner provides an annotated version of Kogyo's Figure 1, which we reproduce below.



Id. The annotated figure shows an exploded isometric view of Kogyo's energy-absorbing guard block and base with near-side members 22 and 32 colored in yellow and labeled "first structural member," and members 23 and 33 colored in red and labeled "at least one structural member."

(4) Summary as to the "base" limitation of claim 1

We understand from the information in the Petition that Petitioner contends that structural members 22 or 32 correspond to the at least one first structural member and members 23 or 33 correspond to the at least one structural member recited in the "base" limitation of claim 1. *See* Pet. 43–49.

b) Petitioner's contentions with respect to the "secured bollard" limitation of claim 1

Claim 1 also recites "each bollard being secured to at least one of the at least one first structural member and the at least one structural member of the base for the respective bollard." Ex. 1001, 9:27–29 (the "secured bollard" limitation). This limitation requires that each bollard of the "at least one bollard" recited in claim 1 be secured to *either* ("at least one of") *the* at least one first structural member or *the* at least one structural member (or both). The recitation of the at least one first structural member and the at least one structural member in the secured bollard limitation traces its antecedent basis to the recitation of at least one first structural member and at least one structural member, respectively, in the "base" limitation. *See id.* at 9:19–29.

Petitioner contends that "[e]ach bollard of Kogyo (support columns 36) is fixed to the lower part of the frame members 32 using nuts and bolts." Pet. 50 (referencing Ex. 1008 ¶ 15). Petitioner concludes that "*[a]ccordingly*, each bollard is secured to the at least one first structural

member of the base. *Id.* (referencing Ex. 1003 ¶ 141) (emphasis added). That is, Petitioner contends that frame member 32 is *the* at least one first structural member.

Petitioner adds that a person having ordinary skill in the art "would have understood that each bollard of Kogyo (support columns 36) is secured to the at least one structural member (transverse frame member 33) of the base." Pet. 50. Petitioner further contends, apparently in the alternative, that it would have been obvious to affix column 36 to frame member 33. *Id.* at 51. Petitioner reasons that a person having ordinary skill in the art would have been motivated to make this modification to create more support for support member 50. *Id.* (referencing Ex. 1003 ¶ 144). Because the "secured bollard" limitation requires each bollard to be secured to *either* the at least one first structural member *or* the at least one structural member, we need not analyze this obviousness position, as we understand Petitioner to contend that column 36 is secured to member 32.

Based on Petitioner's contentions with respect to the "secured bollard" limitation, we understand Petitioner's position to be that the recited at least one first structural member corresponds to Kogyo's member 32 (and not member 22) and the recited at least one structural member corresponds to Kogyo's member 33 (and not member 23). This understanding of Petitioner's position is confirmed by the disclosure of Kogyo itself, which discloses that column 36 is secured to member 32 of second base 31 and not member 22 of first base 21. *See* Ex. 1008 ¶ 15. We note that neither Petitioner nor Mr. Roland contends that Kogyo's column 36 is secured to any component of first base 21. *See* Pet. 49–52; Ex. 1003 ¶¶ 141–147.

c) Petitioner's contentions with respect to the "retaining supporting media" limitation of claim 1

Claim 1 also recites:

> wherein *the* at least one first structural member or *the* at least one structural member or both are configured or tied together to retain within the base supporting media introduced into the base when the base is mounted in the excavation such that the rotation is resisted of a bollard or bollards and the base from an impact against the bollard or bollards.

Ex. 1001, 9:35–41 (emphasis added) (the "retaining supporting media" limitation). As evident from the use of the article "the" preceding "at least one first structural member" and "at least one structural member," this limitation imposes additional requirements on the structural elements recited in the "base" and "secured bollard" limitations of claim 1. Said another way, claim 1 recites multiple structural and functional requirements for the same "first structural member" and "one structural member" recited in the "base" limitation of claim 1. Also, this limitation requires either the at least one first structural member *or* the at least one structural member to be configured or tied together to retain supporting media.

Petitioner contends that "Kogyo teaches at least one structural member, e.g., member 22 or 23, that allows for supporting media (concrete) to be placed or poured into the base 20." Pet. 61 (referencing Ex. 1003 ¶¶ 165–166). Petitioner explains that Kogyo discloses that first base 21 is placed on a foundation and concrete is poured to the height of first base 21 to fix first base 21 to the foundation. *Id.* at 60–61. Neither Petitioner nor Mr. Roland contends that members that make up Kogyo's second base 31, including members 32, to which columns 36 are secured, are configured to retain the concrete. *See id.*; Ex. 1003 ¶¶ 165–166.

Petitioner also contends that "Kogyo teaches that when excessive impact force acts on the guard block 40, the damage due to the impact load stops at the bollards (support columns 36)." Pet. 61–62. (referencing Ex. 1008 ¶ 33). Petitioner adds that, "[a]s a result of the bollards[']resistance to rotation from an impact, the first base 21 of the mounting base 20 is not damaged." *Id.* at 62 (referencing Ex. 1008 ¶ 33; Ex. 1003 ¶¶ 167–168). Petitioner continues that "Kogyo explains that forces applied to the bollard are transmitted to the base. *Id.* (referencing Ex. 1008 ¶ 34).

d) Patent Owner's counter arguments

Patent Owner contends that "Petitioner fails to appreciate that the 'base' and 'structural members' are not words in a vacuum but a structure to support the bollards such that the bollards and bollard structure resist rotation." Prelim. Resp. 30. Patent Owner explains that the "secured bollard" limitation "requires that the bollard be 'secured' to a structural member of the base, which [the "retaining supporting media" limitation] provides must be configured to retain supporting media." *Id.* at 31.

Patent Owner argues that Kogyo's support columns, the alleged bollards, "are attached only to . . . second base 31, and not to the first base, which is what Petitioner argues retains media." Prelim. Resp. 31. Patent Owner continues that "[t]o satisfy the limitations of the '865 claims, the base, among other things, must be configured to retain media as well as be secured to a bollard. Kogyo does not teach a base that does both." *Id.*; *see also id.* at 36 ("The independent claims all require that the bollard(s) be secured to at least one structural member of the base and that ***this*** base be configured to retain supporting media.").

With respect to the requirement concerning resisting rotation, Patent Owner argues that claim 1 requires that "the base and retained media must

be what cause the bollard and bollard base to resist rotation upon impact." Prelim. Resp. 36. Patent Owner explains that "[t]he invention of Kogyo does not and cannot resist rotation, as it was intended to deform and break upon impact, and even completely fall to the ground." *Id.* at 37 (referencing Ex. 1008 ¶ 33).

e) Our determinations with respect to claim 1

We agree with Patent Owner that Petitioner fails to contend that the structural components of Kogyo's base to which the alleged bollards are secured are configured to retain within the base supporting media introduced into the base when the base is mounted in the excavation, as required by the "retaining supporting media" limitation of claim 1. Instead, Petitioner appears to treat the elements of claim 1 as a list of separate structural requirements and ignores the relationship between the requirements. This approach is fatal to Petitioner's position with respect to claim 1 under this ground.

Specifically, Petitioner identifies member 32 as *the* at least one first structural member to which support column 36—the alleged bollard—is attached and member 33 as *the* at least one structural member when discussing the "secured bollard" limitation. Pet. 50–51. Petitioner then identifies first base 21 (and specifically, member 22 or 23) as the structural component configured to retain supporting media (concrete) with respect to the "retaining supporting media" limitation. Pet. 60–61. The Petition fails to explain adequately how Kogyo's member 32 or 33 of second base 31 can satisfy the "secured bollard" limitation and member 22 or 23 of first base 21 can satisfy the "retaining supporting media" limitation when the claim requires the same structure to satisfy both of these limitations (*the* at least first structural member or *the* at least one structural member).

Accordingly we determine, on the record before us, that the information in the Petition fails to demonstrate a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103 over Kogyo and Carlyle.[9]

2. Independent Claims 16 and 33 and Dependent Claims 2–4, 15, 17–20, 31, 32, 34, and 35.

In asserting that independent claims 16 and 33 are rendered obvious by the combination of Kogyo and Carlyle, Petitioner relies on the same contentions with respect to the "base," "secured bollard," and "retaining supporting media" limitations of these claims as presented for claim 1. Pet. 43–49, 49–52, 60–61. Also, Petitioner relies on its contentions with respect to independent claims 1, 16, and 33 in asserting that dependent claims 2–4, 15, 17–20, 31, 32, 34, and 35 are rendered obvious by the combination of Kogyo and Carlyle. *See* Pet. 63–69 (addressing the specific subject matter of these dependent claims without further reference to the underlying independent claims).

Accordingly, for the reasons discussed above in connection with our analysis of claim 1, we determine, on the record before us, that the information in the Petition fails to demonstrate a reasonable likelihood that claims 2–4, 15–20, and 31–35 are unpatentable under 35 U.S.C. § 103 over Kogyo and Carlyle.

[9] Petitioner relies on Carlyle to support a contention that it would have been obvious to construct Kogyo's system in a shallow excavation. Pet. 58–60. Petitioner does not rely on Carlyle to remedy the deficiencies with Petitioner's contentions with respect to Kogyo's base structures.

E. Ground 2: Claims 5–14 and 21–30 as Allegedly Obvious Over Kogyo, Carlyle, and Cold-Formed Steel Design

Petitioner relies on its contentions with respect to independent claims 1 and 16 for Ground 1 in asserting that the combination of Kogyo, Carlyle, and Cold-Formed Steel Design renders obvious dependent claims 5–14 and 21–30, which depend, directly or indirectly from either claim 1 or claim 16. *See* Pet. 69–78 (addressing the specific subject matter of these dependent claims without further reference to the underlying independent claims).

Accordingly, for the reasons discussed above in connection with our analysis of claims 1 and 16 for Ground 1, we determine, on the record before us, that the information in the Petition fails to demonstrate a reasonable likelihood that claims 5–14 and 21–30 are unpatentable under 35 U.S.C. § 103 over Kogyo, Carlyle, and Cold-Formed Steel Design.

F. Ground 3: Claims 1–4, 15–20, and 31–35 as Allegedly Obvious Over Kogyo, Hill, and Carlyle

In Ground 3, Petitioner presents an alternative position to that presented for Ground 1—relying on Hill for its teaching of a plurality of bollards—"[t]o the extent that it is determined . . . that the guard block as a whole in Kogyo (i.e., the two support columns 36 covered by impact absorbing bodies forming guard block 40) forms a single bollard." Pet. 78–79. For this ground, Petitioner relies on the same contentions with respect to the "base," "secured bollard," and "retaining supporting media" limitations of independent claims 1, 16, and 33 as presented for claim 1 for Ground 1. Pet. 84–85 ("For at least the same reasons discussed [for Ground 1], Kogyo and Carlyle teach the Preambles, as well as limitations B-F and H-J of claim 1, 16, and 33."). Petitioner also relies on the contention presented for

dependent claims 2–4, 15, 17–20, 31, 33, and 35 for Ground 1 in its analysis for Ground 3. *Id.* at 85.

Accordingly, for the reasons discussed above in connection with our analysis of Ground 1, we determine, on the record before us, that the information in the Petition fails to demonstrate a reasonable likelihood that claims 1–4, 15–20, and 31–35 are unpatentable under 35 U.S.C. § 103 over Kogyo, Hill, and Carlyle.

G. Ground 4: Claims 5–14 and 21–30 as Allegedly Obvious Over Kogyo, Hill, Carlyle, and Cold-Formed Steel Design

For Ground 4, Petitioner contends that "[f]or at least the same reasons discussed above in Ground 2, Kogyo, Carlyle, and Cold-Formed Steel Design teach the features of dependent claims 5–14 and 21–30." Pet. 86. Accordingly, for the reasons discussed above in connection with our analysis of Grounds 1 and 2, we determine, on the record before us, that the information in the Petition fails to demonstrate a reasonable likelihood that claims 5–14 and 21–30 are unpatentable under 35 U.S.C. § 103 over Kogyo, Hill, Carlyle, and Cold-Formed Steel Design.

H. Ground 5: Claim 35 as Allegedly Obvious Over Kogyo, Hill, Carlyle, and Glaesener

For Ground 5, Petitioner relies on Glaesener for disclosing the subject matter of dependent claim 35 "[t]o the extent it is determined that Kogyo in view of Hill does not explicitly teach that a 'rebar member' extends between its two bollards." Pet. 86. Petitioner otherwise relies on its contentions with respect to independent claim 33, from which claim 35 depends, asserted for Grounds 1 and 3.

Accordingly, for the reasons discussed above in connection with our analysis of Grounds 1 and 3, we determine, on the record before us, that the

information in the Petition fails to demonstrate a reasonable likelihood that claim 35 is unpatentable under 35 U.S.C. § 103 over Kogyo, Hill, Carlyle, and Glaesener.

III. CONCLUSION

After considering all the evidence and arguments presently before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail with respect to any of the Challenged Claims. Accordingly, we do not institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is *denied*.

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