

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Dayus Register & Grille, Inc.,

Petitioner,

v.

INV Holdings Inc.,

Patent Owner.

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Case No. \_\_\_\_\_

U.S. Patent 9,765,988

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**PETITION FOR *INTER PARTES* REVIEW**

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**EXHIBIT LIST**

<b>Exhibit No.</b>	<b>Document</b>
1001	U.S. Patent No. 9,765,988 ("the '988 patent")
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1003	Declaration of Richard T. Kaczkowski, P.E.
1004	International Publication No. WO 2005/124054 ("Lennox")
1005	U.S. Patent No. 3,996,845 ("Harris")
1006	Nailor Drawing No. 5000-3a (June 10, 2011) ("Nailor")
1007	U.S. Patent No. 10,871,305 ("the '305 patent")
1008	File History of the '305 patent
1009	Excerpt of Tool and Manufacturing Engineers Handbook, Plastic Part Manufacturing, Volume 8.
1010	Excerpt of Dictionary of Materials and Testing (2d ed. 2000)
1011	U.S. Patent No. 7,771,259 ("Pettit")
1012	Excerpts from Sheppard, <i>Extrusion of Aluminium Alloys</i> (1 <sup>st</sup> ed. 1999)
1013	U.S. Patent No. 4,103,601 ("the Dayus Patent")
1014	U.S. Patent No. 3,046,852
1015	U.S. Patent No. 3,185,068
1016	U.S. Patent No. 3,589,265
1017	<i>INV Holdings Inc. et al. v. Dayus Register &amp; Grille, Inc.</i> , Civ. A. No. 2:21-cv-05107-GRB-ST, Joint Discovery Plan, ECF No. 19 (E.D.N.Y. Mar. 2, 2022).

Exhibit No.	Document
1018	Federal Court Management Statistics – Comparison Within Circuit (Mar. 31, 2022), <i>available at</i> <a href="https://www.uscourts.gov/statistics/table/na/federal-court-management-statistics/2022/03/31-3">https://www.uscourts.gov/statistics/table/na/federal-court-management-statistics/2022/03/31-3</a> .
1019	<i>Synkloud Technologies, LLC et al. v. Cartessa Aesthetics, LLC</i> , Case No. 21-CV-4423 (GRB) (JMW), Memorandum Decision & Order (E.D.N.Y. Apr. 6, 2022)
1020	<i>Wiesel v. Apple, Inc.</i> , Case No. 19-cv-7261, Memorandum & Order (E.D.N.Y. Nov. 5, 2020)
1021	U.S. Patent No. 4,089,257
1022	United States Gypsum Company, SHEETROCK® Brand Metal Bead and Trim (2000)
1023	U.S. Patent No. 6,705,052 ("Larson")
1024	U.S. Patent Publication No. 2007/0232217 ("Davis")
1025	"Flexible" Definition from Dictionary.com
1026	"Flexible" Definition from Cambridge English Dictionary
1027	"Flexible" Definition from Collins English Dictionary
1028	Affidavit of Nathaniel Frank-White
1029	Affidavit of Silver Leach
1030	Declaration of Edward L. Tulin

## **I. INTRODUCTION**

Dayus Register & Grille, Inc. ("Petitioner") respectfully petitions, under 35 U.S.C. § 311 and 37 C.F.R. § 42.21, for *inter partes* review ("IPR") of claims 1-4, 7, and 9-23 ("the challenged claims") of U.S. Patent No. 9,765,988 ("the '988 patent") (Ex. 1001) on the grounds discussed below.<sup>1</sup>

The '988 patent relates primarily to a grille with a flexible mounting flange to cover an air vent, and to methods of installing that air vent cover. The design of the claimed grille, which includes generic, well-known structures such as a frame, linear bars, holes, and slots, is universally recognizable as a building product that had been used in residential and commercial construction for many years prior to the application date of the '988 patent. Each and every element of the challenged claims is disclosed in the prior art discussed below, which was not before the USPTO during prosecution of the '988 patent. Had it been, the challenged claims of the '988 patent would have unquestionably been recognized as unpatentable.

Accordingly, Petitioner respectfully requests that the Board cancel the challenged claims.

## **II. GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)**

Petitioner certifies that the '988 patent is available for IPR and that Petitioner

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<sup>1</sup> Unless otherwise noted, all emphases have been added.

is not barred or estopped from requesting IPR of the challenged claims on the grounds in this petition.

### **III. THE '988 PATENT AND THE RELATED STATE OF THE ART**

#### **A. The State of the Art Relating to the '988 Patent**

The '988 patent generally relates to the field of building and construction materials. In particular, the '988 patent discloses a drywall extrusion grille, which is designed to be installed and finished in a drywall clad wall or ceiling system to cover an opening or aperture, such as from a duct for heating, ventilation, and air conditioning ("HVAC"). (Ex. 1003, ¶ 10.) Grilles to cover HVAC apertures or vent openings have been well-known for many years, and have been specifically utilized in connection with drywall systems for decades. (*Id.*, ¶ 11.) Such grilles have both a cosmetic aspect (i.e., a decorative cover to a vent opening), as well as a functional aspect (i.e., the ability to direct air flow through the use of elements, such as vanes and cross members, which typically have been oriented perpendicular to one another, and may also be adjustable/moveable). (*Id.*) Grilles with those elements were well-known to POSITAs as of at least January 2014. (*Id.*)

Equally well-known to POSITAs at that time (and for many years prior) were various methods of making those grilles, such as extrusion, which involves forcing material through a die to form a desired shape. (Ex. 1003, ¶ 12.) Extrusion

was an extremely well-known and well-established process as of January 2014.

(*Id.*) Since at least the 1990s, extrusion grilles (i.e., grilles made by an extrusion process) for use in conjunction with drywall systems have typically been made of plastic or a metal such as aluminum. (*Id.*) Indeed, since at least that time (i.e., well before the application date of the '988 patent), POSITAs in this field have recognized that "[a]mong the industrial methods by which aluminium billets can be transformed to exceedingly complex shapes, extrusion has no rival and has firmly established itself as a major industrial process." (*Id.*; *see also* Ex. 1012.)

Indeed, extrusion was universally recognized as a desirable method of manufacturing products such as grilles, not just in reference books (*see* Ex. 1012), but also in numerous patents. (Ex. 1003, ¶¶ 13-14.) For instance, in 1978, U.S. Patent No. 4,103,601 ("the Dayus Patent"), entitled "Air Grille Components and Air Grille Therefrom," was issued to Petitioner's founder, Lloyd Dayus. The Dayus Patent specifically noted that frames for "air grilles," which included "flange[s]," as well as "air director blade members," were "formed typically of roll formed, die formed, or *extruded material* of uniform cross-section." (Ex. 1013 at 3:20-26; 3:37-39.) Many other patents that predated even the Dayus Patent recognized extrusion as a viable and desirable process for making products similar

to those described in the '988 patent.<sup>2</sup> (Ex. 1003, ¶ 15.) In addition, extrusion was recognized as a desirable process for making flush-mounted grilles in U.S. Patent No. 7,771,259 ("Pettit"), which was cited during prosecution of the '988 patent (and, as discussed below, was distinguished on grounds other than the process by which its products disclosed were made). (*See, e.g.*, Ex. 1003, ¶ 16; Ex. 1011 at Abstract ("A frame apparatus capable of being flush mounted relative to a wall, ceiling or floor surface, is made up by joining linear frame sections each providing interconnected elements *formed by an extrusion process.*"); *see id.* at 2:65-67 ("A further objective is to provide such a register frame that is made by *extruding* metal or plastic for low cost manufacture."); *id.* at 3:62-66 ("The frame sections **12,**

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<sup>2</sup> *See, e.g.*, U.S. Patent No. 3,046,852 at 1:9-11 ("This invention relates to new and useful improvements in composite metal gratings for floors, cat-walks, decks, runways and the like and more particularly to gratings, the elements of which are all formed of *metal extrusions.*"); U.S. Patent No. 3,185,068 at 2:22-23 ("The diffusers of the invention may be made from *metal extrusions.*"); *id.* at 1:28-30 ("The side walls 6, 7 may have flanges 11, 12, respectively, formed as an integral part of the *extrusion* along the downstream edge of the respective side wall."); U.S. Patent No. 3,589,265 at 2:57-59 ("The side and end marginal portions of the frame are preferably formed of *extruded aluminum.*")

14, may be made of metal or plastic materials and . . . are configured to be made by an *extrusion process so as to be produced economically.*")

In addition, long before the application date of the '988 patent, "corner bead" for use with drywall systems was widely available. (Ex. 1003, ¶ 17.) Such corner bead typically had indented slots, in the form of grooves, channels, recesses, or similar means in the portion of its frame used for mounting. (*Id.*) These slots were designed to increase the surface area and promote adhesion to the joint compound used to install corner bead. (*Id.*) As but one example, as of at least the year 2000, United States Gypsum Company was offering "corner bead" and "J-trim" for use with drywall systems,<sup>3</sup> with both through-holes for attachment to drywall using screws, as well as indented slots for gripping joint compound. (*Id.*) These sorts of indented slots—in the form of grooves, channels, and recesses—were also widely used specifically in connection with vent covers long before the application date of the '988 patent. (*Id.*; see also Ex. 1023 [Larson] at Fig. 2, see also *id.* at 2:20-22 ("[T]he striations serve to provide an additional high surface area to which the overapplied finishing materials can adhere."); Ex. 1024 [Davis] at [0021]

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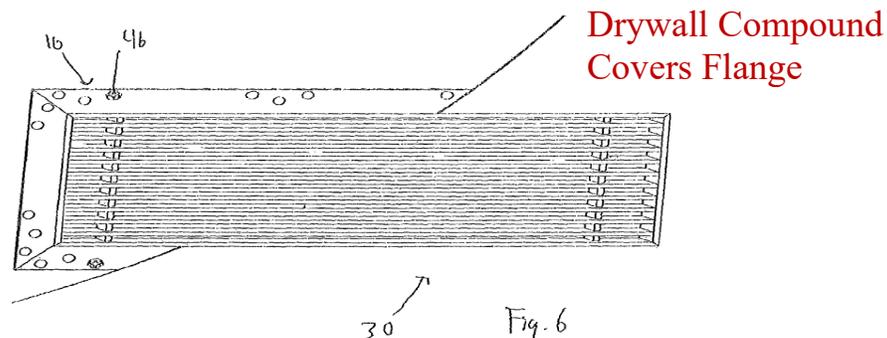
<sup>3</sup> The term "J-trim" would have been recognized by a POSITA to refer to the "J"-like shape of the flange, which is also depicted, for instance, in the '988 patent. (Ex. 1003 at pg. 9 n.2.)

(describing a flush-mounted vent cover including a flange with "a plurality of recesses 29," which were "used to increase the adherence of the joint compound used to seal the seam between vent cover 20 and wall".)

### B. The '988 Patent

The '988 patent is entitled "Dry Wall Extrusion Grille." (Ex. 1001.) The application that led to the '988 patent was filed on January 6, 2014, and issued on September 19, 2017. (*Id.*)

The '988 patent describes a grille cover for an air vent in a configuration that has been used for decades. It is designed so that its mounting apparatus (referred to as a "flange") may be covered with drywall compound or plaster when installed to provide a smooth, finished appearance, as shown below in Fig. 6 (annotated):



(Ex. 1003, ¶ 19.) The specification of the '988 patent is extremely short, and teaches very little about the claimed subject-matter. (*Id.*, ¶ 20.) For instance, the "Detailed Description of the Invention" takes up less than half a column (Ex. 1001 at 3:18-39), while much of the specification consists of a discussion of three prior art patents (*id.* at 1:12-43). The largest portion of the specification is the

"Summary of the Invention" section, which, with the exception of its first two sentences, consists entirely of a series of "objects of the present invention." (Ex. 1003, ¶ 20.) Those "objects" generally reproduce the language of the twenty-three claims with no additional explanation or teachings, as shown for instance below:

<b>Ex. 1001 at 1:62-64</b>	<b>Ex. 1001 at cl. 4</b>
"It is an object of the present invention for the frame to be installed with a sheet rock screw before plaster or a joint compound is applied."	"The extrusion grille of claim 3 wherein said frame is installed with said sheet rock screw before plaster or a joint compound is applied."

The challenged claims are all apparatus claims, and are generally directed to a multi-part grille, which includes a frame, linear bar grille,<sup>4</sup> and flexible mounting flange (i.e., the outer rectangular portion of the frame) that includes through-holes and indented slots. (Ex. 1003, ¶ 21.) The '988 patent has one independent claim; all other challenged claims (with the exception of claim 4) depend from claim 1.

Claim 1 is representative:

1. A dry wall extrusion grille comprising:  
a frame,  
  
a linear bar grille located in said frame comprised of vanes and cross members that direct a flow of air,

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<sup>4</sup> The '988 patent claims use the term "grille" as part of phrases that refer to both the overall claimed apparatus, as well as to a sub-part of that apparatus. (Ex. 1003 at pg. 10, n.3.)

pre-perforated through holes,

indented slots, and

a flexible mounting flange located between a top and bottom edge of the frame and extending outwardly from said frame;

said indented slots defined as small recesses in said flexible mounting flange that receive plaster, joint compound or mud, said pre-perforated through holes located in the flexible mounting flange.

The dependent claims are generally directed to either: (i) additional structural elements (such as sheet rock screws, as in claim 3, or specific dimensions, as in claim 13); or (ii) installation steps or instructions (as in claims 2 and 14). (Ex. 1003, ¶ 22.)

The '988 patent is part of a family that includes U.S. Patent No. 10,871,305 ("the '305 patent"), which is a continuation-in-part of the application that ultimately issued as the '988 patent. The '305 patent is the subject of a separate, concurrently filed IPR.

### **C. The Prosecution History of the '988 Patent**

The scope of the challenged claims changed significantly during prosecution—twice through amendments by the applicant, and separately through an Examiner's Amendment. As originally filed, claim 1 recited:

A dry wall extrusion grille comprising:

a frame,

a liner bar grille,

sheet rock screws,  
pre-perforated through holes,  
indented slots, and  
a flexible edge.

(Ex. 1002 at Page 9 of 176.) In response to a non-final rejection based on U.S.

Patent No. 7,771,259 ("Pettit"), the applicant amended claim 1 as set forth below:

1. (Currently Amended) A dry wall extrusion grille comprising:  
a frame,  
a liner bar grille comprised of linear bars or vanes and cross members,  
~~sheet rock screws,~~  
pre-perforated through holes,  
indented slots, and  
a flexible edge.

(Ex. 1002, 5-31-2016 Amendment, Page 62 of 176.) The applicant's arguments and amendment failed to convince the Examiner that the pending claims were patentable over Pettit. After the Examiner issued a final rejection based on Pettit, the applicant amended claim 1 for the second time:

1. (Currently Amended) A dry wall extrusion grille comprising:  
a frame,  
a liner linear bar grille comprised of ~~linear bars or vanes~~ and cross members that  
direct flow of air,  
pre-perforated through holes,  
indented slots, and  
a flexible edge;  
said indented slots defined as small recesses in a mounting flange that receive  
plaster, joint compound or mud.

(Ex. 1002, 12-27-16 Amendment, Page 97 of 176.)

Yet, this amendment also proved inadequate to secure issuance; it would take an Examiner's Amendment for that. The Examiner's Amendment made multiple changes to claim 1 and two dependent claims, the most significant of which was to change "a flexible edge" to "a flexible *mounting flange located between a top and bottom edge of the draft and extending outwardly from said frame.*" (Ex. 1002, 6-1-17 Notice of Allowance, Page 149 of 176.) The Examiner also clarified that "the location of" this newly claimed "flexible mounting flange is slightly below the top edge of the frame as to provide a space for plaster to be applied which gives the product a flush appearance." (*Id.*, Page 150 of 176.) The prior art of record did not, in the Examiner's view, "teach the claimed invention with the location of the mounting flange being between a top and bottom edge of the frame." (*Id.*) Whether or not that is true, the prior art discussed below—which

was not before the USPTO or considered by the Examiner—teaches exactly that limitation (and all others of the challenged claims). (Ex. 1003, ¶ 27.)

**D. Person of Ordinary Skill in the Art of the '988 Patent**

The relevant art for the '988 patent is building and construction materials, and in particular, accessories such as grilles or grates for finishing drywall applications. (Ex. 1003, ¶ 62.) A person of ordinary skill in that art, as of January 2014, would have been an individual with at least a Bachelor's degree in engineering, or at least 3 years of experience designing, manufacturing, installing, and/or finishing drywall using accessories such as grilles or grates. (*Id.*)

**IV. 37 C.F.R. § 42.104(B)(3): CLAIM CONSTRUCTION**

Claim terms must be given their ordinary and customary meaning, which is the meaning a POSITA would have given the term at the time of the alleged invention, considering the entire patent and file history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). Such meaning is informed principally by intrinsic evidence (*i.e.*, the claims, written description, and prosecution history) and, to a lesser extent, extrinsic evidence (*i.e.*, dictionaries, treatises, and expert witnesses, etc.). *Id.* at 1314. The applicant for the '988 patent did not act as a lexicographer for any of the '988 patent's claim terms, and, as discussed below, all of those terms should be given their plain and ordinary meaning as understood by a

POSITA as of January 2014 for purposes of this proceeding.<sup>5</sup>

**A. "Dry Wall Extrusion Grille"**

The phrase "dry wall extrusion grille," which appears only in the preamble of claim 1, is not limiting. (Ex. 1003, ¶ 34.) Alternatively, the phrase should be construed to mean "a grille, for use with dry wall, which was made at least in part by a process of forcing material through a die to form a desired shape." (*Id.*, ¶ 36.)

The phrase "dry wall extrusion grille" appears seven times in the specification, including in claim 1. It is never explicitly defined, although the specification uses the term "extrusion grille" multiple times to refer to the entire apparatus illustrated in Figures 4, 5, and 6.<sup>6</sup> For instance, Figure 4 shows that

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<sup>5</sup> Petitioner does not concede that the challenged claims satisfy all statutory requirements, including the definiteness requirements in 35 U.S.C. § 112. Because Petitioner is entitled to present only prior art-based grounds in an IPR Petition, Petitioner reserves the right to present arguments in other proceedings concerning grounds that cannot be raised in IPR (*e.g.*, § 101, § 112, etc.).

<sup>6</sup> The dependent claims each include a reference to "[t]he extrusion grille of claim 1" (or, in the case of claim 1, a reference to "[t]he extrusion grille of claim 3"). Claim 1 does not include a limitation, in either the preamble or the body of that

(*cont'd*)

"[t]he extrusion grille **30** has an aluminum profile **34**, a flexible mounting flange **36** that is used for fastening to a wall or ceiling with perforated through holes **40**." (Ex. 1001 at 3:21-25; *see also id.* at 3:25-37.) In other words, the phrase "extrusion grille" is used as a generic shorthand for describing the entire apparatus, and this two-word phrase could be replaced with the generic term "apparatus" without altering the meaning of claim 1. (Ex. 1003, ¶ 33.) Moreover, the remainder of the preamble (referring to "dry wall") merely states an intended use (i.e., an apparatus that is intended to be used with drywall systems).<sup>7</sup> (*Id.*)

A preamble is not generally limiting, unless "it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). The Federal Circuit recently reaffirmed that "a preamble is not limiting 'where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.'" *Arctic Cat*

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claim, that is directed to an "extrusion grille"; that two-word phrase appears only in the preamble of claim 1 as part of the four-word phrase "dry wall extrusion grille."

<sup>7</sup> A POSITA would typically spell the term "drywall" as one word, although the '988 patent spells it using two words. (Ex. 1003 at pg. 4 n.1.)

*Inc. v. GEP Power Prod., Inc.*, 919 F.3d 1320, 1328 (Fed. Cir. 2019) (citations omitted).

The preamble of claim 1 does not recite any essential structure or steps, nor is it necessary to give life, meaning, or vitality to the claim. Instead, it merely states an intended purpose (using the claimed apparatus with dry wall) and a method of manufacturing (extrusion). Extrusion is not discussed in the '988 patent, except as part of a two-word phrase ("extrusion grille"), which is used as a generic shorthand to describe the structurally complete assembly recited in the challenged claims. (Ex. 1003, ¶ 34.) The remainder of claim 1 does not refer to that intended purpose or method of manufacturing, and instead defines a structurally complete multi-part apparatus. (*Id.*) Thus, as in *Catalina*, "deletion of the disputed phrase from the preamble ... [would] not affect the structural definition or operation of the [invention] itself." 289 F.3d at 810.

Moreover, the applicant never relied on the preamble to distinguish the claimed invention during prosecution of the application that led to the '988 patent, which further confirms that it does not limit the scope of the claimed apparatus. (*See generally* Ex. 1002; *see also* Ex. 1003, ¶ 28.)

Furthermore, the reference to "extrusion" in the preamble is, at most, a reference to one process that can be used to make the grille that is defined by the body of claim 1 (and the dependent claims). (Ex. 1003, ¶ 35.) A POSITA would

have understood the term "extrusion," as of January 2014, to refer to the process of forcing material through a die to form a desired shape, which a POSITA would have further understood to have been widely and commonly used at that time (and for decades prior to that time) for a variety of materials, including metal and plastic.<sup>8</sup> (*Id.*) This means that, if extrusion is considered to be separate from the two-word phrase "extrusion grille," then claim 1 is a product-by-process claim—i.e., "one in which the product is defined at least in part in terms of the method or process by which it is made." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 158 n.\* (1989).

The process of making the claimed apparatus is not entitled to any patentable weight. *See, e.g., In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985) ("If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."); *see also Purdue Pharma L.P. v. Epic Pharma, LLC*, 811 F.3d 1345, 1354 (Fed. Cir. 2016). Moreover, the "extrusion" element does not

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<sup>8</sup> The 8th Volume of the Tool and Manufacturing Engineers Handbook, Plastic Part Manufacturing defines "extrusion" to mean "[t]he process of forming continuous shapes by forcing a molten plastic material through a die." (Ex. 1009.)

connote a specific structure, and thus it cannot be considered a structural characteristic. *In re Nordt Dev. Co.*, 881 F.3d 1371, 1374 (Fed. Cir. 2018). The Board has previously held that analogous terms should be construed as product-by-process limitations that were not entitled to patentable weight. *See, e.g., Ex parte Bowden*, No. 2013-004414, 2015 WL 2284187, at \*3 (P.T.A.B. May 13, 2015) (sustaining an anticipation rejection and holding that "the term '*extruded*' in the phrase 'extruded component' is a product-by-process limitation").

Notwithstanding the foregoing, if the Board determines that the preamble of claim 1 is entitled to patentable weight, then it should be construed to mean "a grille, for use with dry wall, which was made at least in part by a process of forcing material through a die to form a desired shape." (Ex. 1003, ¶ 36.) This is consistent with how a POSITA would have understood the use of this phrase at the relevant time. (*Id.*) A POSITA would not have understood this phrase to refer to any particular type of extrusion process, or to connote any particular manufacturing steps, other than the general process of forcing material through a die to form a desired shape.<sup>9</sup> (*Id.*)

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<sup>9</sup> This proposed construction is also consistent with the construction that was applied to "extrusion grille" by the Examiner during prosecution of the related '305 patent: "grille assembly comprising at least one extruded component." (Ex. 1008,

(*cont'd*)

Ground 1 utilizes a construction for the preamble that is non-limiting, while Ground 2 utilizes the alternative construction for the preamble—namely, "a grille, for use with dry wall, which was made at least in part by a process of forcing material through a die to form a desired shape."

**B. "Flexible"**

As of January 2014, a POSITA would have understood the plain and ordinary meaning of the term "flexible" to be "capable of being bent, usually without breaking; easily bent."<sup>10</sup> (Ex. 1003, ¶ 37.) The specification does not

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1-27-20 Non-Final Rejection, Page 206 of 296; *see also id.*, 7-27-20 Amendment, Page 242 of 296 (noting that "[t]he term does not necessarily mean that all parts are formed by a process of extrusion," and further noting that "Applicant would agree with the Examiner interpretation".)

<sup>10</sup> *See, e.g.*, Ex. 1026 [*available at* <https://www.dictionary.com/browse/flexible>]; *see also* Ex. 1027 [*available at* <https://dictionary.cambridge.org/us/dictionary/english/flexible>] ("able to bend or to be bent easily without breaking"); Ex. 1028 [*available at* <https://www.collinsdictionary.com/us/dictionary/english/flexible>] ("A flexible object or material can be bent easily without breaking.").

define the term "flexible." (*Id.*, ¶ 38.) And during prosecution, the term "flexible" was consistently used in accordance with this plain and ordinary meaning. (*Id.*, ¶ 39.)

For instance, the Examiner rejected the then-pending claims of the '988 patent application over Pettit, which disclosed a "mounting flange which is *capable of bending* to be installed within a hole in a wall." (Ex. 1002, 3-9-16 Non-Final Rejection, Page 48 of 176.) In response, the applicants argued that this prior art did "not teach a flexible edge due to the use of right angle tabs" (*id.*, 5-31-16 Amendment, Page 66 of 176); in other words, the use of those tabs restricted the ability of the edge to bend, thus rendering it inflexible. (Ex. 1003, ¶ 40.) And then in maintaining the rejection in light of Pettit, the Examiner noted that "[w]hile it may be true that there would be very little flexibility [i.e., capability of bending] at the edges of [Pettit] due to the angle tabs, there would certainly be flexibility at any point down the length of the frame." (Ex. 1002, 7-26-16 Final Rejection, Page 75 of 176.) This is consistent with the way that a POSITA would have understood the terms "flexibility" and "flexible" as of January 2014. (Ex. 1003, ¶ 40.)

## **V. SUMMARY OF CHALLENGE AND RELIEF REQUESTED**

### **A. 37 C.F.R. § 42.104(b)(1): The Challenged Claims**

Petitioner requests IPR and cancellation of the challenged claims (*i.e.*, claims 1-4, 7, and 9-23) in view of the references discussed below.

**B. 37 C.F.R. § 42.104(b)(1): Prior Art Overview and Specific Grounds of Rejection**

**1. Overview of Lennox (WO 2005/124054)**

Lennox is an international patent publication entitled "A Device and Method for Flush Mounting Air Duct Grates, Electrical Switch Plates, Electrical Receptacle Plates, Electrical Light Fixtures and Other Drywall Aperture Covers on Drywall Surfaces Using Drywall Bead." (Ex. 1004.) Lennox was published on December 29, 2005—nearly a decade before the application date of the '988 patent. In contrast to the limited disclosure of the '988 patent specification, which includes just six figures and four columns of text, Lennox includes thirty-two figures and twenty-nine pages of text. Lennox was not before the USPTO during prosecution of the application that led to the '988 patent.

Lennox "relates to the finishing of an aperture in a drywall surface to accept a flush mounted cover or insert therein." (Ex. 1004 at 1.) More particularly, Lennox is directed to providing "a finished drywall aperture which may optionally accept a variety of fixed or removable aperture inserts such that the outer surface of the aperture inserts [is] *substantially flush* with the outer surface of the sheet or sheets of drywall through which the aperture is located." (*Id.* at 6.) This flush appearance is achieved through the use of "corner bead," which is "integral with or fixedly or removably attachable to apparatus which would otherwise be separately

mounted in, through, behind or approximate the drywall surface," including "hot and cold air duct openings." (*Id.* at 8-9.)

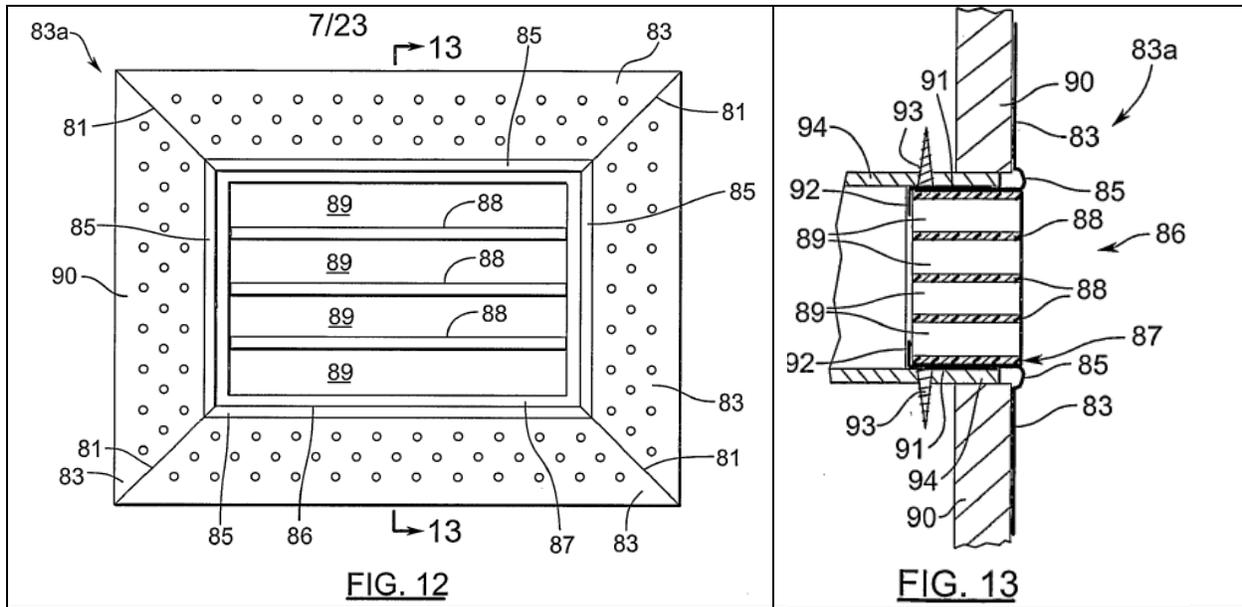
Lennox further teaches that "[m]ost commercially available corner bead may be used for the within embodiments, but plastic corner bead is preferred due to pliability." (*Id.* at 9.) Lennox depicts the use of at least two different types of corner bead in connection with the embodiments of the disclosed invention: "L" bead and "J" bead. (*See id.* at 9; Figs. 2, 2A, 3, 3A.) A POSITA would have recognized that as of 2005, standard commercially available corner bead typically included grooves, channels, or other recesses to provide an increased surface area for adherence of the joint compound during installation. (Ex. 1003, ¶ 44.)

In the "Detailed Description of the Preferred Embodiments of the Invention" section, Lennox first teaches several typical aspects of corner bead, which are depicted in Figures 1-6. These Figures show a variety of elements that would have been familiar to a POSITA at that time, and include "flanges 38," "holes 40 typically used to accept drywall screws," and "larger holes along the length of the flanges which are typically used to aid with retention of drywall compound typically feathered from the crest of bead 37 over flange 38, past the flange edge 40a and smoothly transitioning into the outside surface of drywall 44a." (*See id.* at 11-12.) In addition to the foregoing, Lennox also teaches, consistent with the typical practices at the time of Lennox, the use of "elongated slots . . . for

providing edges for gripping the drywall compound to be applied over the corner bead and feathered over flange 50 and onto the face of the drywall sheet to which the corner bead is being attached." (*Id.* at 12-13.) In contrast to the "holes" that "help adhere flange 44 to the surface of drywall 44a by collecting glue or spray contact cement used to adhere the lower surface of flange 44 to the outer surface 44a of a heated drywall," the elongated slots are for "catchment of excess glue or contact cement alternatively used for mounting the corner bead." (*Id.*) In other words, while the "holes" are designed to allow the drywall compound to penetrate the entire cross-section of the flange and seep between the lower surface of the flange and the wall to which it is being attached or installed, the elongated slots instead catch the joint compound, because those function as recesses that do not penetrate the entire cross-section of the flange. (Ex. 1003, ¶ 45.)

A POSITA would have understood that these various elements—flexible flanges, holes for drywall screws, elongated slots for receiving joint compound—could generally be combined/utilized with the various assemblies that employ corner bead, and that are depicted in the other Figures. (*Id.*, ¶ 46.)

In particular, those elements would have been utilized with the grilles that were specifically taught by Lennox in Figures 12 and 13. Lennox teaches and depicts the use of corner bead as part of a grille, showing front and side views of a "bead plate with an air grate insert," in Figures 12 and 13, respectively:



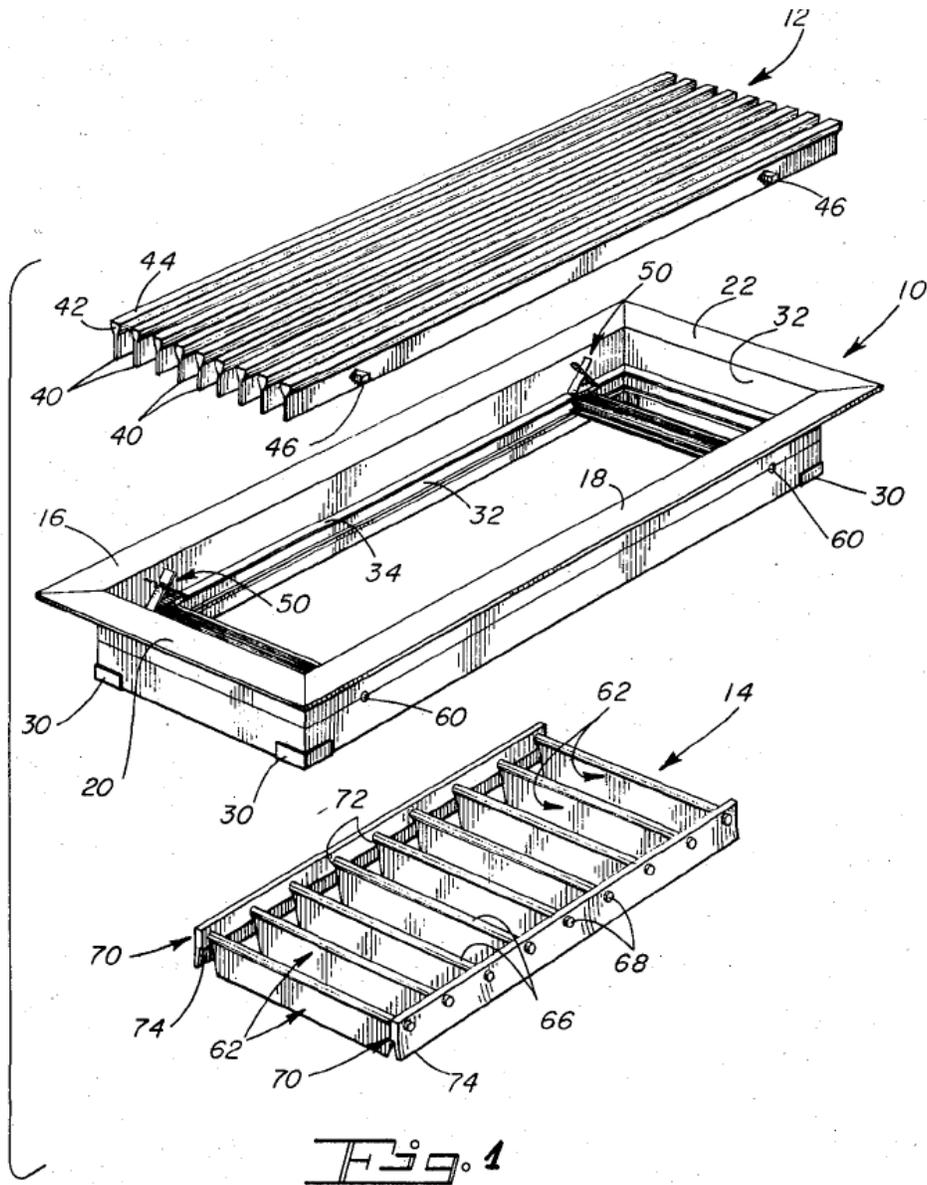
(Ex. 1004; *see also* Ex. 1003, ¶ 47.)

## 2. Overview of Harris (U.S. Patent No. 3,996,845)

Harris is a U.S. Patent entitled "Air Handling Grille and Method of Making the Same." Harris issued on December 14, 1976—nearly four decades before the application date of the '988 patent. Harris was not before the USPTO during prosecution of the application that led to the '988 patent.

Harris describes an "air handling grille with an open rectangular frame," wherein the fully assembled frame, like that of the challenged claims, includes "vanes" and "cross members." (Ex. 1005 at Abstract.) And as with at least certain of the challenged claims, the core of the grille described in Harris is "assembled with and disassembled from a supporting frame." (Ex. 1005 at 1:17-27.) Harris also teaches that the elements of its grille are "capable of manufacture and

assembly at economic advantage"—i.e., utilizing "aluminum extrusions." (*Id.* at 1:26-27; 6:32-38.) Figure 1 of Harris illustrates an exemplary embodiment of the air handling grille:



(Ex. 1005.) According to Harris, "[t]he frame **10** may vary widely in construction but as illustrated and as presently preferred, the frame is of the extruded aluminum type with opposing parallel side sections 16, 18 and opposing parallel end sections

20, 22 all of identical cross sectional configuration." (Ex. 1005 at 2:9-13; *see also id.* at 2:34-35 (noting that all sections of the frame are made according to an "extrusion process"); *id.* at 3:1-5 ("Similarly, the mode of construction of the vanes may vary but an extruded aluminum construction is presently preferred with an enlarged front section **42** on each vane and a flat front surface at **44.**"); *id.* at 3:59-60 ("The members **58, 58** may be of extruded aluminum construction . . . ."); *id.* at 4:21-27 ("Construction of the vanes **62, 62** may vary widely but aluminum extrusions are presently preferred . . . .").) In other words, Harris provides that each and every element of its air handling grille—which predated the '988 patent application by nearly 40 years—should preferably be made by extrusion. (*See* Ex. 1003, ¶¶ 50-51; Ex. 1005 at 6:32-35 ("As will be apparent from the foregoing, the grille of the invention can be constructed substantially throughout of aluminum extrusions and thus at economic advantage.")) This is consistent with the understanding that a POSITA would have had at this time, and for many years prior to the application date of the '988 patent: extrusion is a preferred, economically advantageous, and well-known method of making air handling grilles. (Ex. 1003, ¶ 51.)

### **3. Overview of Nailor**

Nailor is a printed publication dated June 10, 2011, which was available to and accessible to the public by no later than November 29, 2011. As of 2011, a

POSITA would have recognized that Nailor Industries Inc., which published Nailor, was a major manufacturer of HVAC accessories. (Ex. 1003, ¶ 52.) Nailor was not before the USPTO during prosecution of the application that led to the '988 patent.

Nailor was accessible to the public as of at least November 29, 2011 through Nailor's website, as it evident from the Internet Archive known as the Wayback Machine, and the Affidavits of Nathaniel Frank-White (Ex. 1028) and Silver Leach (Ex. 1029). The Wayback Machine has captured an active snapshot of Nailor's website as of June 19, 2011 at

<https://web.archive.org/web/20110619013317/http://nailor.com/>. As of June 19,

2011, a member of the public could have accessed Nailor by clicking on the

"Submittals" tab on the left side of the website, then clicking on the "Air

Distribution" sub-tab, then on the "By Model" sub-tab. (See Ex. 1030, ¶ 5; Ex.

1028, ¶¶ 5-7.) That would in turn generate a menu of options, one of which was

"5000 Types, J, K1, K2, M & N, 6-10-11." (*Id.*) Clicking on that link as of at least

November 29, 2011 would have taken a member of the public to

[https://web.archive.org/web/20111129130104/http://nailor.com/submittals/Air\\_Dist](https://web.archive.org/web/20111129130104/http://nailor.com/submittals/Air_Distribution/50/5000-3A_B.pdf)

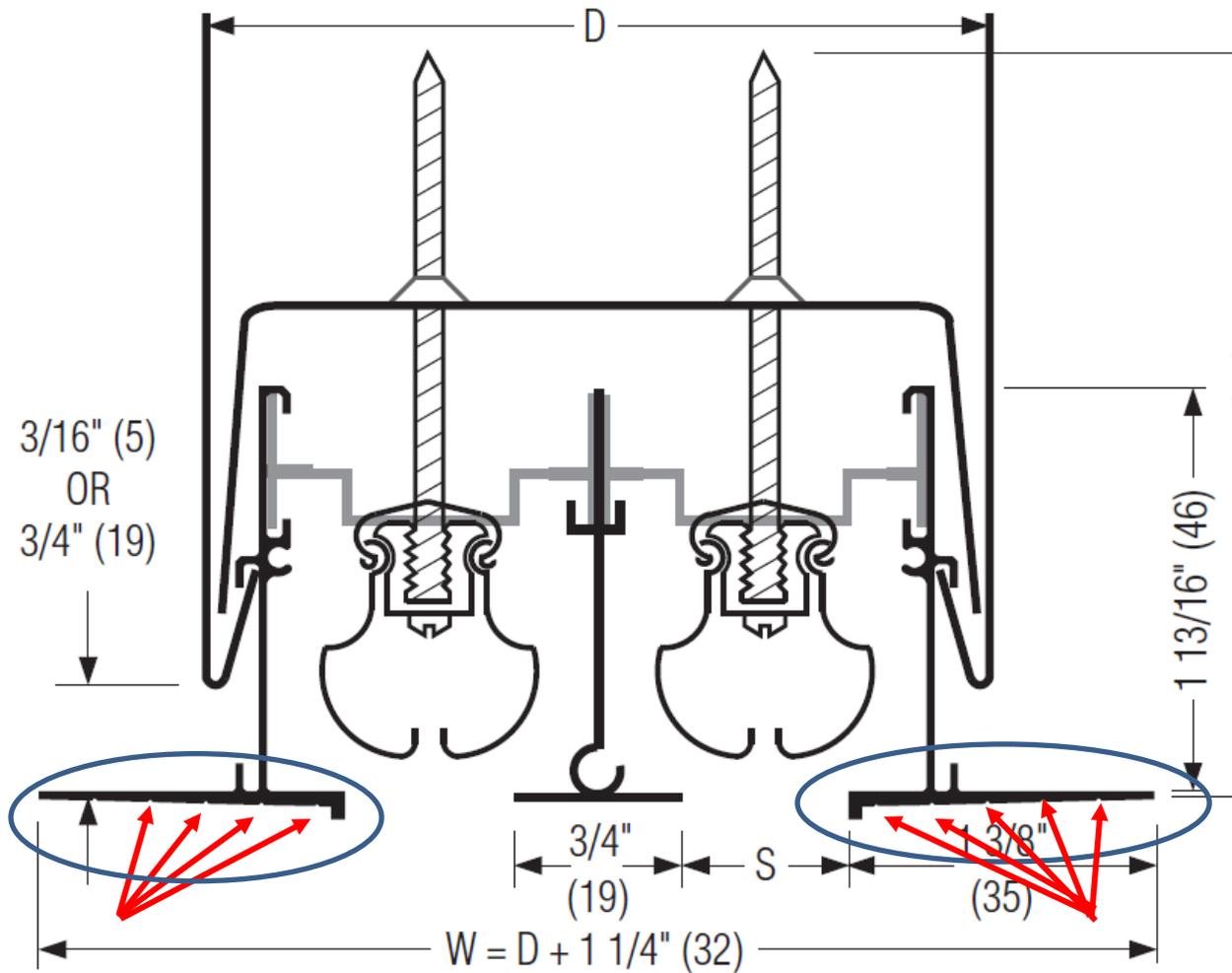
[ribution/50/5000-3A\\_B.pdf](https://web.archive.org/web/20111129130104/http://nailor.com/submittals/Air_Distribution/50/5000-3A_B.pdf), which is Nailor. (*Id.*) The presence of Nailor on the

Wayback Machine on an active link presents a "prima facie case that the art was

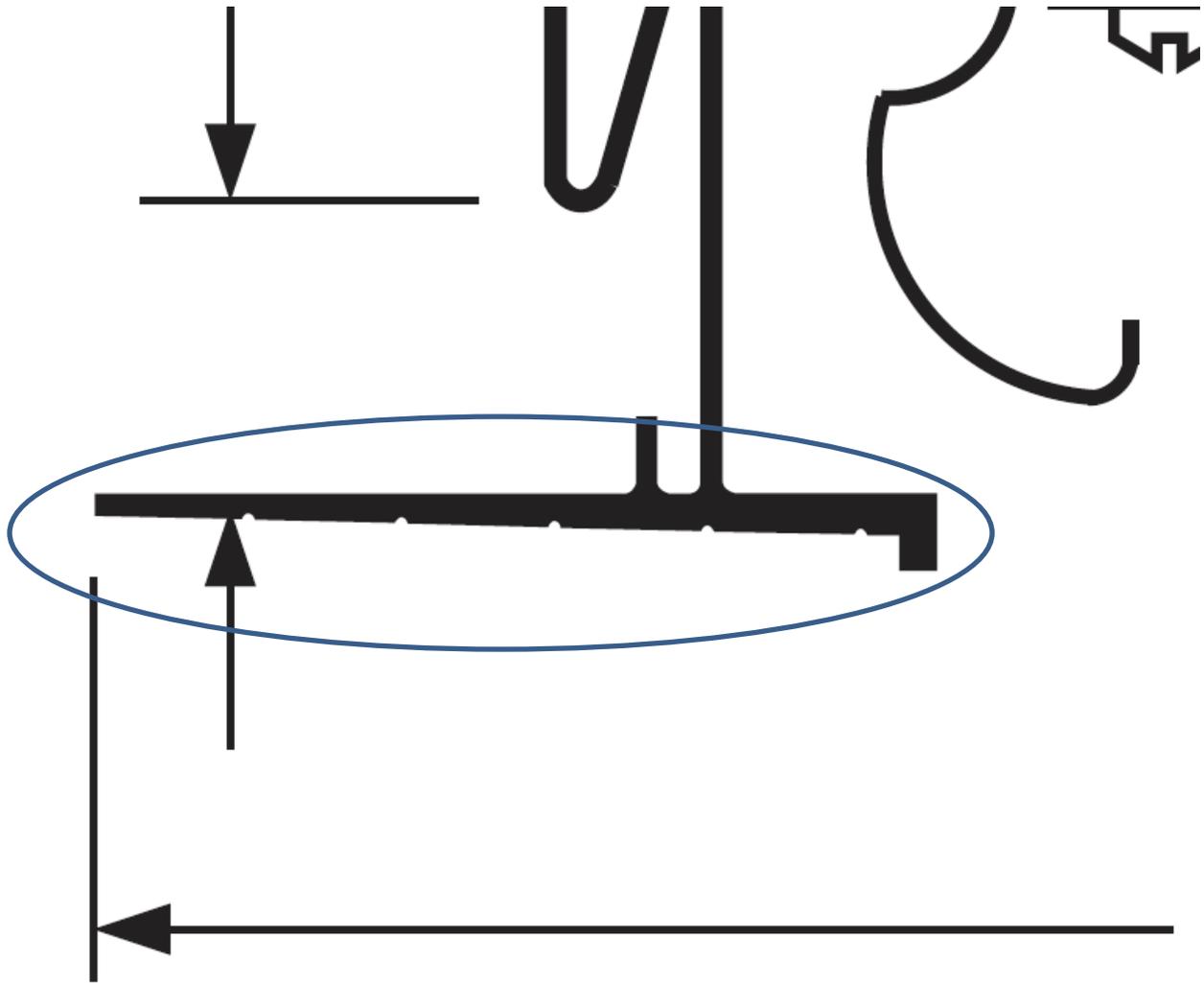
publicly accessible at the date and time provided in the time stamp." MPEP §

2128(II)(E); *see also Valve Corp. v. Ironburg Inventions Ltd.*, 8 F.4th 1364, 1374-75 (Fed. Cir. 2021) ("District courts have taken judicial notice of the contents of webpages available through the Wayback Machine as facts that can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned."). Nailor was thus publicly accessible and available as a publication as of no later than November 29, 2011—and actually was accessed by members of the public, including at least one individual employed by a Nailor distributor in that timeframe. (*See* Ex. 1028, ¶¶ 5-7; Ex. 1029, ¶¶ 5-7.)

Nailor depicts and describes a linear slot diffuser. As of 2011, linear slot diffusers were well-recognized and widely utilized as covers for HVAC vents, and were used to control the distribution of air through such vents, (Ex. 1003, ¶ 53), which Nailor describes as controlling "[t]he volume and direction of the discharge air." (Ex. 1006 at 1.) Linear slot diffusers at that time, including Nailor, were typically made from "extruded aluminum." (*Id.*) Nailor's 5000 Series linear slot diffuser was "[a]vailable with 1 to 10 slots," and included several different frame types. (*Id.*) Among the types depicted in Nailor was "Type J," which refers to a "Concealed Mounting" option. (*Id.*) This Type J linear slot diffuser from Nailor is depicted below in the enlarged annotated figure, which shows two outwardly extending flanges (circled) and small recesses in the flanges (identified with red arrows):



(Ex. 1003, ¶ 53.) In order to better illustrate the small recesses in the outwardly extending flanges, the lower left portion of the above figure from Nailor has been further enlarged below:



In addition to the foregoing drawing itself, which a POSITA would have recognized as disclosing small recesses in the outwardly extending flanges, Nailor further confirms that these small recesses are present and intended to aid with the finishing process by describing the "Type J" embodiment as having a "Tape & Spackle Frame." (Ex. 1006.) A POSITA would have understood a "Tape and Spackle Frame" to be referring to a frame that utilizes spackle (i.e., a form of joint

compound) to provide for flush mounting, which the small recesses in the outwardly extending flanges would have facilitated. (Ex. 1003, ¶ 55.)

**C. Specific Grounds of Rejection**

Petitioner asserts the following specific grounds of rejection:

Ground	Claims	Basis	Prior Art
1	1-4, 7, 9-23	§ 102/§ 103	Lennox
3	1-4, 7, 9-23	§ 103	Lennox in Light of Harris and Nailor

**VI. GROUND 1 – THE CHALLENGED CLAIMS ARE ANTICIPATED BY LENNOX OR, IN THE ALTERNATIVE, RENDERED OBVIOUS BY LENNOX ALONE**

**A. Claim 1**

**1. Claim 1 [pre]: "A dry wall extrusion grille comprising"**

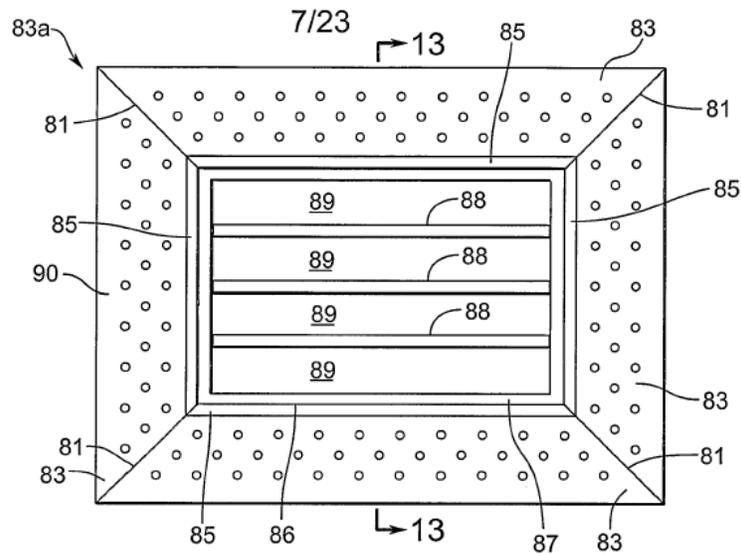
As discussed above, if given its proper claim construction, the preamble of claim 1 is non-limiting. But in any event, Lennox teaches a grille that is intended to be used with drywall. (Ex. 1003, ¶ 66.) For instance, Lennox teaches a "system and method for flush mounting aperture covers with finished drywall surface [that] may be used to flush mount hot air exhaust grates [and] cold air intake grates." (Ex. 1004 at Abstract; *see also id.* at 17 ("FIGS. 12 and 13 show another embodiment in which bead plate 83a retains a flush air grating 87" in which "[a]ir grate 87 is held in place by means of friction fit but may alternatively be held in place by [and] other means which would preferably allow the air grate to be removable.").) A POSITA would have understood these references to

"grate"/"grating" to be synonymous with "grilles." (Ex. 1003, ¶ 66.) While Lennox does not teach any particular process by which those grilles are made, a POSITA would have understood that as of January 2014, extrusion was one method of making them. (*Id.*) In any event, the reference to "extrusion" is non-limiting, and need not be taught by the prior art in order to render the claim 1 unpatentable. *See, e.g., Thorpe*, 777 F.2d at 697.

## 2. Claim 1[a]: "a frame"

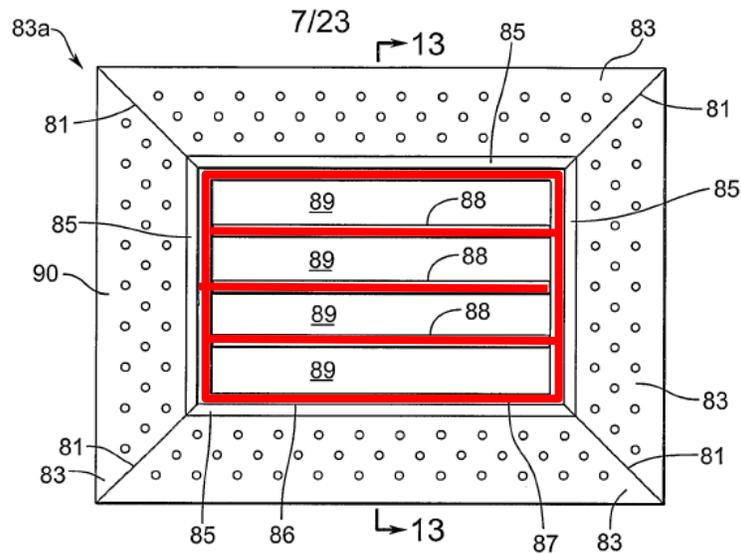
Lennox discloses this limitation, because it teaches a grille with a frame. (Ex. 1003, ¶ 67.) Specifically, Lennox teaches that "[w]hile the frame further comprising the outwardly extending bead and laterally extending flanges may be used for any number of general applications[,] they are particularly useful for substantially all apertures which would be required in a drywall surface or to recess items which would ordinarily not be flushed with a drywall surface . . . . includ[ing] hot and cold forced air grates . . . ." (Ex. 1004 at 8.)

Fig. 12 of Lennox shows a drywall extrusion grille with a frame, which is shown as the combination of the four elements designated as 83 below (Ex. 1003, ¶ 68):



**3. Claim 1[b]: "a linear bar grille located in said frame comprised of vanes and cross members that direct a flow of air"**

Lennox discloses this limitation, because, as noted above, it teaches embodiments that include "hot and cold forced air grates," (Ex. 1004 at 8), which would have been understood by a POSITA to include linear bar grilles, as shown for instance above in Figure 12. (Ex. 1003, ¶ 69.) That in turn would have been understood as of January 2014 to typically include "vanes and cross members that direct a flow of air." (*Id.*) The linear bar grille is highlighted below in red in the annotated version of Figure 12 from Lennox (*id.*, ¶ 70):



Although Lennox teaches "a linear bar grille located in said frame comprised of vanes and cross members that direct a flow of air," Figures 12 and 13 illustrate a particular embodiment that includes vanes. A POSITA would have understood Lennox's disclosure of "hot and cold forced air grates" to include grilles with both vanes and cross members (i.e., with elements that are oriented perpendicular to one another), as those terms were typically used interchangeably to refer to these sorts of HVAC accessories.<sup>11</sup> (Ex. 1003, ¶ 71.)

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<sup>11</sup> See, e.g., U.S. Patent No. 4,089,257 (Ex. 1021) (using the terms "grille" and "grating" interchangeably to refer to air vent covers including perpendicularly oriented elements).

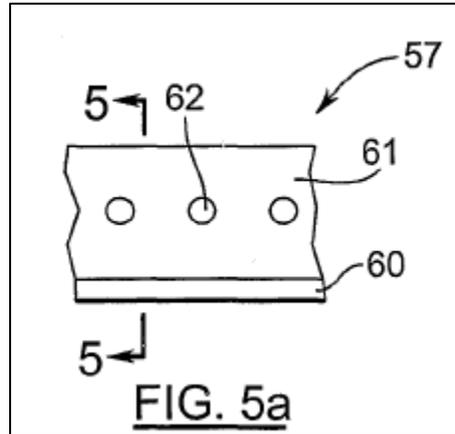
Alternatively, element 1[b] is obvious in light of Lennox because it would have been obvious to modify the embodiment show in Figures 12 and 13 to include cross members, as this was well known to permit better control over the direction of air flow, which was regarded as a desirable quality of air vent covers at that time.<sup>12</sup> (Ex. 1003, ¶ 72.)

#### 4. Claim 1[c]: "pre-perforated through holes"

Lennox discloses this limitation, because it teaches that "typical prior art corner bead" includes a series of "holes 40 typically used to accept drywall screws." (Ex. 1003, ¶ 73; Ex. 1004 at 11; *see also id.* at 13 ("Fig. 5a shows corner bead 57 with apertures 62 which may again be used to hold drywall screws and/or to act as a gripping surface for drywall compound.")) Figure 5a of Lennox, showing the pre-perforated through holes as element 62, is reproduced below:

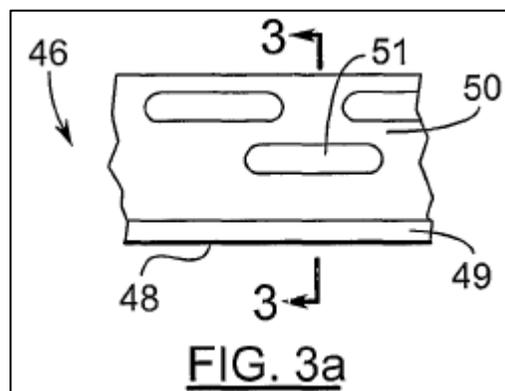
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<sup>12</sup> *See Game & Tech. Co. v. Activision Blizzard Inc.*, 926 F.3d 1370, 1379 (Fed. Cir. 2019) (noting that a single prior art reference can support a case of obviousness "if it would have been obvious to modify that reference to arrive at the patented invention") (citations omitted).



**5. Claim 1[d]: "indented slots"**

Lennox discloses this limitation, because it teaches what a POSITA would have understood to be the use of indented slots. (Ex. 1003, ¶ 74.) Those slots are depicted in multiple configurations (for instance, in Fig. 3a), and are designed "for providing edges for gripping the drywall compound to be applied over the corner bead and feathered over flange 50 and onto the face of the drywall sheet to which the corner bead is being attached." (Ex. 1004 at 13.) Figure 3a of Lennox is reproduced below, with the elongated slots illustrated as element 51:



As noted above, a POSITA would have understood that these sorts of elongated slots, which were part of a standard set of elements to be used with extrusion drywall grilles at the time of Lennox, would typically be combined and utilized with the multiple assemblies that were depicted and discussed elsewhere in Lennox (including for instance the grille in Figure 12) so as to provide a better "gripping" surface for the joint compound. (Ex. 1003, ¶ 75.) As such, it would have been immediately apparent to a POSITA that the elongated slots in Figure 3a of Lennox would have been combined with the through-holes depicted in Figure 5a of Lennox, and the devices shown in Figures 12 and 13, even if that was not explicitly depicted in a single illustration in Lennox. (*Id.*)<sup>13</sup>

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<sup>13</sup> See, e.g., *Unified Patents Inc. v. Intellectual Ventures I LLC*, Case IPR2016-01643, Paper 51 at 29 (P.T.A.B. Mar. 26, 2018). Alternatively, a POSITA would have been motivated to combine the through-holes depicted in Figure 5a with the elongated slots in Figure 3a, with the overarching design in Figures 12 and 13 of Lennox, because those complementary structures would have made it easier to install the grates depicted in Figures 12 and 13, and would have furthered Lennox's goal of providing a surface for "gripping" joint compound that would be used to install the devices depicted in Figures 12 and 13 and

(cont'd)

A POSITA would have further understood that such slots would have encompassed both recesses (i.e., elements that did not penetrate through the entire cross-section of the frame), as well as holes—because both slots and holes perform the same function of increasing surface area for better joint compound adhesion. (Ex. 1003, ¶ 77.) That said, in the context of the embodiment of Figure 12 (which shows the use of J-bead), those slots would have typically been utilized as recesses. (*Id.*) These recessed slots would have been understood to be distinct from the through-holes depicted, for instance, in Figures 7-8 of Lennox, as well as the through-holes depicted in Figures 2a and 5a. (*Id.*; *see also* Ex. 1004 at 12-13.)

**6. Claim 1[e]: "a flexible mounting flange located between a top and bottom edge of the frame and extending outwardly from said frame"**

Lennox discloses this limitation by describing the mounting flange both in terms of its characteristics (i.e., it is flexible), and in terms of its location in the broader apparatus (i.e., between a top and bottom edge of the frame and extending outwardly from it). (Ex. 1003, ¶ 78.) In particular, Lennox teaches the use of "outwardly directed flanges to independent flex outwardly as the frame is pushed inwardly into the drywall aperture thus permitting more accurate and easier

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providing for a flush-mounted installation with drywall screws typically holding the aperture covers in place. (Ex. 1003, ¶ 76; *see also* Ex. 1004 at 5, 13.)



7. **Claim 1[f]: "said indented slots defined as small recesses in said flexible mounting flange that receive plaster, joint compound or mud"**

Lennox discloses this limitation, because it teaches the use of indented slots, which are depicted in multiple configurations. (Ex. 1003, ¶ 79.) For instance, Fig. 3a, shown above in connection with element 1[d]), depicts indented "slots" that are designed "for providing edges for gripping the drywall compound to be applied over the corner bead and feathered over flange 50 and onto the face of the drywall sheet to which the corner bead is being attached. (Ex. 1004 at 13.) Lennox's references to "drywall compound" are synonymous to "mud." (Ex. 1003, ¶ 79; Ex. 1004 at 2 ("In order to make the surface of a wall, ceiling or other surface appear continuous, drywall compound known in the trade as 'mud' is applied . . . ."); *see also id.* at 4 (referring to multiple different trade names of joint compounds, including "Durabond," "Synko," and "CGC").)

Alternatively, to the extent that the Board concludes that the "elongated slots" taught by Lennox do not encompass the sort of "small recesses" claimed in element 1[f], it would have been obvious to modify the embodiments of Lennox so that the "elongated slots" shown for instance in Lennox Figure 3a are defined as "small recesses," because that would allow the "elongated slots" to perform the stated function of "providing edges for gripping the drywall compound" without allowing that drywall compound to penetrate to the underside of the flange. (Ex.

1003, ¶ 80.) A POSITA would have been recognized that as undesirable in at least certain circumstances, because the presence of drywall compound on the underside of the flange would have made even, flush-mounting more difficult, and increased the potential that the grille would protrude away from the wall. (*Id.*)

**8. Claim 1[g]: "said pre-perforated through holes located in the flexible mounting flange"**

Lennox discloses this limitation because, as shown above in Figure 5a of Ex. 1004, and as discussed in connection with Element 1[c], Lennox teaches the use and desirability of using pre-perforated through holes in the flexible mounting flange. (Ex. 1003, ¶ 81.)

**B. Claim 2: "The extrusion grille of claim 1 wherein said flexible mounting flange is fastened to a wall or ceiling with said pre-perforated through holes."**

Lennox discloses all elements of Claim 2 because it teaches the use of pre-perforated through holes as shown above in Fig 5a, and also teaches that the flexible mounting flange is fastened to a wall or ceiling using screws, which a POSITA would have understood to be used with the holes depicted for instance in Fig. 5a. (Ex. 1003, ¶ 82; *see also* Ex. 1004 at 3 ("Metal corner bead is usually held in place by drywall screws . . . ."); *id.* at 5 ("The aperture covers [including "air duct grills] would typically be installed with screws."); *id.* at 11 (teaching that "holes 40 [are] typically used to accept drywall screws"); *id.* at 13 ("FIG. 5a shows corner bead 57 with apertures 62 which again may be used to hold drywall

screws . . . ."); *id.* at 14 ("[M]etal corner bead is held in place preferably through a multiplicity of drywall screws 72, which are screwed into the drywall through apertures 39a.".)

**C. Claim 3: "The extrusion grille of claim 1 further comprising sheet rock screws."**

Lennox discloses all elements of Claim 3 because it teaches the use of sheet rock screws in connection with the extrusion grille. (Ex. 1003, ¶ 83; Ex. 1004 at 3 ("Metal corner bead is usually held in place by drywall screws . . . ."); *id.* at 5 ("The aperture covers [including "air duct grills"] would typically be installed with screws."); *id.* at 11 (teaching that "holes 40 [are] typically used to accept drywall screws"); *id.* at 13 ("FIG. 5a shows corner bead 57 with apertures 62 which again may be used to hold drywall screws . . . ."); *id.* at 14 ("[M]etal corner bead is held in place preferably through a multiplicity of drywall screws 72, which are screwed into the drywall through apertures 39a.".)

A POSITA would have understood Lennox's reference to "drywall screws" to be synonymous with "sheet rock screws." (*See, e.g.*, Ex. 1003, ¶ 84; Ex. 1008, 10-8-20 Interview Summary, Page 264 of 296 (substituting the term "dry wall" for "sheet rock" in then-pending claims).)

**D. Claim 4: "The extrusion grille of claim 3 wherein said frame is installed with said sheet rock screw before plaster or a joint compound is applied."**

Lennox discloses all elements of Claim 4 because it teaches an installation process for the various embodiments of the frame that includes a step of attaching the frame of the grille first, followed by a step of applying drywall compound. (Ex. 1003, ¶ 85; Ex. 1004 at 13 ("FIG. 5a shows corner bead 57 with apertures 62 which again may be used to hold drywall screws and/or to act as a gripping surface for drywall compound."); *id.* at 15 ("FIG. 8 shows drywall screws 74 holding metal corner bead 71 in place for feathering."). In order to "act as a gripping surface for" the joint compound in Lennox, the sheet rock screw must have been installed before the application of that joint compound. (Ex. 1003, ¶ 85.) And as noted above, generally and widely used corner bead materials would have been understood to be desirably combined and included with the assemblies that are depicted elsewhere in Lennox, including the grilles in Figures 12 and 13. (*Id.*)

**E. Claim 7: "The extrusion grille of claim 1 wherein said pre-perforated mounting through holes provide multiple mounting options to address multiple field conditions."**

Lennox discloses all elements of Claim 7 because it teaches the use of pre-perforated mounting through holes that provide multiple mounting options, as shown for instance in FIG. 5a of Ex. 1004. (Ex. 1003, ¶ 86.) In that Figure, there are three different mounting locations/options depicted; a POSITA would have

understood from that exemplary cross section that a variety of other configurations could be used throughout the frame to provide for multiple different mounting options. (*Id.*)

**F. Claim 9: "The extrusion grille of claim 1 wherein said extrusion grille comprises multiple, pre-punched mounting holes for fastening in a wide range of wall conditions and materials."**

Lennox discloses all elements of Claim 9 for the same reasons as discussed for Claim 7, above. (Ex. 1003, ¶ 87.)

**G. Claim 10: "The extrusion grille of claim 1 wherein said extrusion grille comprises multiple, pre-punched mounting holes for attachment to underlying studs (support beams)."**

Lennox discloses all elements of Claim 10 because it teaches a grille that includes multiple, pre-punched mounting holes, as shown for instance as apertures 62 in Figure 5a of Ex. 1004. (Ex. 1003, ¶ 88.) A POSITA would have understood that the apertures 62 taught by Lennox could be used for screws that would be attached to underlying studs (although that is not required). (*See, e.g., id.*; Ex. 1004 at 1-2 (noting that drywall screws are typically used for attachment to "wooden studs" and are designed to be attached "firmly against the studding").)

**H. Claim 11: "The extrusion grille of claim 1 wherein said extrusion grille comprises pre-punched holes accurately sized for standard wall board/sheet rock screws so no special hardware or tools are required."**

Lennox discloses all elements of Claim 11 because it teaches the use of "typical[]" drywall screws (Ex. 1004 at 1-2), and the use of apertures that are

specifically designed for such screws, as shown and discussed in the context of FIG. 5a. (Ex. 1003, ¶ 89.) Because of these references to "typical" hardware, used with a grille that was designed to be used with such typical hardware, a POSITA would have understood that the installation steps for the grille taught by Lennox would not have required any special hardware or tools—i.e., nothing other than the traditional and typical tools that were used to install extrusion grilles on drywall as of 2005. (*Id.*)

**I. Claim 12: "The extrusion grille of claim 1 wherein said flexible mounting flange fastens said extrusion grille to uneven wall surfaces."**

Lennox discloses all elements of Claim 12 because it teaches a frame including flexible mounting flanges that fasten the extrusion grille to uneven wall surfaces—i.e., wall surfaces that are not completely flat. (Ex. 1003, ¶ 90; Ex. 1004 at 7 ("[T]he frame further comprising the perimeter bead and outwardly directed flanges to independently flex outwardly as the frame is pushed inwardly into the drywall aperture thus permitting more accurate and easier installation of the corner bead against a surface containing a drywall aperture, which surface is *not completely flat.*".).)

**J. Claim 13: "The extrusion grille of claim 1 wherein inside of said extrusion grille frame extends about  $\frac{3}{4}$ " deep into opening so that said extrusion grille is installed in a wall board or plaster ranging from about  $\frac{1}{4}$ " thru about  $\frac{3}{4}$ " thick."**

Lennox discloses all elements of Claim 13 because it teaches the installation of the various embodiments of extrusion grilles in a wall board or plaster ranging from about  $\frac{1}{4}$ " thru about  $\frac{3}{4}$ " thick. (Ex. 1003, ¶ 91; Ex. 1004 at 16 (noting that certain embodiments are "primarily useful from  $\frac{3}{16}$  inch to  $\frac{5}{8}$  inches").) The range disclosed by Lennox therefore overlaps with the range of Claim 13, and a POSITA would have understood the extrusion grille to extend about  $\frac{3}{4}$ " deep into the opening. (Ex. 1003, ¶ 91.)

**K. Claim 14: "The extrusion grille of claim 1 wherein said extrusion grille allows an installer to cut a rough hole in a wall and slip said extrusion grille frame into said hole."**

Lennox discloses all elements of Claim 14 because it teaches an installation process whereby a rough hole is cut into a wall, and then the extrusion grille frame is slipped into that hole. (Ex. 1003, ¶ 92; Ex. 1004 at 5 ("Drywall is typically applied over the entirety of a room with holes being cut in the drywall either before or after the drywall is attached to the studs, rafters, or other supporting material. . . . Accordingly, the practise of the trade is to have the aforementioned apertures roughed out without the edges being finished, the apertures being roughly the size of the air duct openings . . . . Air duct grills . . . are typically then installed over the apertures on top of drywall surfaces with the edges of the

aperture covers concealing the rough edges of the drywall forming the aperture.");  
*id.* at 6 ("It is therefore an object of the invention herein to provide a finished  
drywall aperture which may optionally accept a variety of fixed or removable  
aperture inserts such that the outer surface of the aperture inserts [is] substantially  
flush with the outer surface of the sheet or sheets of drywall through which the  
aperture is located.".)

**L. Claim 15: "The extrusion grille of claim 1 wherein no routing or recessed cut is necessary."**

Lennox discloses all elements of Claim 15 because it teaches an installation process, as discussed above in connection with Claim 14, that does not require any routing or recessed cut. (Ex. 1003, ¶ 93.) A POSITA would have understood that no such routing or recessed cut would be necessary to achieve an aperture that is "roughed-out without the edges being finished" in order to install the grille taught by Lennox. (*Id.*; *see also* Ex. 1004 at 5.)

**M. Claim 16: "The extrusion grille of claim 1 wherein there is no blocking or added wood necessary for attachment to wall."**

Lennox discloses all elements of Claim 16 because it teaches an installation process, as discussed above in connection with Claim 14, that does not require any blocking or added wood in order for the grille to be attached to the wall. (Ex. 1003, ¶ 94.)

**N. Claim 17: "The extrusion grille of claim 1 wherein said extrusion grille is comprised of aluminum material."**

Lennox discloses all elements of Claim 17 because it teaches the use of "metal corner bead," (ex. 1004 at 9), which a POSITA would have understood to include aluminum for at least a portion of the extrusion grille. (Ex. 1003, ¶ 95.)

Alternatively, it would have been obvious to a POSITA to modify this generic teaching of a "metal" to form the embodiments of Lennox, to the specific use of aluminum to do so, because it was widely known at the time of Lennox that aluminum was a relatively inexpensive, widely available material that was easy to work with, and functioned very well with drywall systems. (*Id.*, ¶ 96.)

**O. Claim 18: "The extrusion grille of claim 1 wherein said extrusion grille is used with a fixed core, a core welded directly to said frame or removable core for access to controls of filtration behind said grille."**

Lennox discloses all elements of Claim 18 because it teaches that the core of the extrusion grille can be fixed to the frame, and, alternatively, that the core can be removeable. (Ex. 1003, ¶ 97; Ex. 1004 at 17 ("Air grate 87 is held in place by means of friction fit but may alternatively be held in place by screws, nuts and bolts, clips, springs, or other means which would preferably allow the air *grate to be removable.*".).)

**P. Claim 19: "The extrusion grille of claim 1 wherein said extrusion grille is mounted, so that the entire frame and grille are flush to a wall providing a seamless installation."**

Lennox discloses all elements of Claim 19 because it teaches an extrusion grille that is flush mounted, providing a seamless installation. (Ex. 1003, ¶ 98.) For instance, the title of Lennox is "A Device and Method for Flush Mounting Air Duct Grates . . . and Other Drywall Aperture Covers on Drywall Surfaces Using Drywall Bead." (See also Ex. 1004 at Abstract ("A device system and method for flush mounting aperture covers with finished drywall surfaces . . ."); *id.* at 1 ("In particular, the invention relates to the finishing of an aperture in a drywall surface to accept a flush mounted cover or insert therein."); *id.* at 6 ("It is therefore an object of the invention herein to provide a finished drywall aperture which may optionally accept a variety of fixed or removable aperture inserts such that the outer surface of the aperture inserts [is] substantially flush with the outer surface of the sheet or sheets of drywall through which the aperture is located.") *id.* at 6 ("[T]he drywall surface finished with drywall compound from the crest of the corner bead, as feathered onto the adjacent drywall surfaces past the end of the bead flanges appear to be substantially flat."); *id.* at 7 ("[T]he outside surface of the insert is preferably flush with the outside surface of the finished drywall aperture."))

**Q. Claim 20: "The extrusion grille of claim 1 wherein said extrusion grille is mounted in only one way, so that it cannot be installed backward."**

Lennox discloses all elements of Claim 20 because it teaches a grille that, when installed, is mounted in only one way, so that it cannot be installed backwards. (Ex. 1003, ¶ 99.) A POSITA would have understood this aspect of the disclosure of Lennox, because, for instance in Figures 12 and 13, the air grille is shown with an asymmetrical design in which the rear portion of the grille would protrude out from the wall if it were installed backward. (*Id.*)

**R. Claim 21: "The extrusion grille of claim 1 wherein said extrusion grille has a special angled edge that provides a step for a standard spackle knife to rest when a plaster or joint compound is being applied."**

Lennox discloses all elements of Claim 21 because a POSITA would have understood that element 85 of FIGS. 12 and 13 would have functioned as an angled edge that provides a step for a standard spackle knife to rest when a plaster or joint compound is being applied. (Ex. 1003, ¶ 100; *see also* Ex. 1004 at 6 (referring to a "slight . . . angle from the surface of the finished drywall to the crest of the drywall bead").)

Alternatively, it would have been obvious to a POSITA at the time of Lennox to modify the embodiment shown in Figures 12 and 13 to include a "special angled edge" as described in Claim 21, because that sort of minor design

modification would have helped to enable the sort of clean, flush finish that is envisioned by Lennox. (Ex. 1003, ¶ 101.)

**S. Claim 22: "The extrusion grille of claim 1 wherein said extrusion grille has a special angled edge that provide a crisp, clean line set up for application of final skim coat of plaster (joint compound)."**

Lennox discloses all elements of Claim 22 for the reasons discussed above for Claim 21, and because a POSITA would have understood that the angled edge of the grille as shown in Figures 12 and 13 would have provided a crisp, clean line set up for application of a final skim coat of plaster/joint compound. (Ex. 1003, ¶ 102.) Indeed, as noted above, Lennox teaches the importance of a "substantially flat" and "substantially flush" appearance between the edge of the grille and the joint compound, (*see* Ex. 1004 at 6), which would have been understood by a POSITA to provide for a crisp, clean line set up to achieve the appearance desired by Lennox. (Ex. 1003, ¶ 103; *see also* Ex. 1004 at 6-7.)

**T. Claim 23: "The extrusion grille of claim 1 wherein said extrusion grille is flush mounted to a wall without requiring a stud."**

Lennox discloses all elements of Claim 23 for the reasons discussed above for Claims 10 and 19. (Ex. 1003, ¶ 103.)

**VII. GROUND 2 – ALTERNATIVELY, THE CHALLENGED CLAIMS ARE OBVIOUS IN LIGHT OF LENNOX IN COMBINATION WITH HARRIS AND NAILOR**

**A. Claim 1**

**1. Claim 1 [pre]: "A dry wall extrusion grille comprising"**

As discussed above, if the preamble is deemed to be limiting, then it should be construed to mean "a grille, for use with dry wall, which was made at least in part by a process of forcing material through a die to form a desired shape." (Ex. 1003, ¶¶ 36, 104.) The combination of Lennox in view of Harris and Nailor discloses all elements of the preamble under this alternative construction.<sup>14</sup> (*Id.*, ¶ 104.)

As noted above, Lennox teaches a grille that is intended to be used in connection with drywall. (*See, e.g.*, Ex. 1004 at Abstract (disclosing a "system and method for flush mounting aperture covers with finished *drywall* surface may be used to flush mount hot air exhaust grates [and] cold air intake *grates*").) While Lennox does not teach any particular process by which those grilles are made, a POSITA would have understood that as of January 2014, extrusion was one

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<sup>14</sup> Because the construction used for the preamble in Ground 1 is broader than that used for Ground 2, the combination of Lennox in view of Harris and Nailor also discloses all elements of the preamble under the construction for Ground 1.

method of making those materials, particularly given the ubiquity of references, dating back decades, that disclose extrusion as such a method. (Ex. 1003, ¶ 105.)

In particular, Harris discloses making an "air handling grille with an open rectangular frame," wherein that frame is "of the extruded aluminum type." (Ex. 1005 at 2:9-13; *see also id.* at 2:34-35, 3:1-5, 3:59-60, 4:21-27.)<sup>15</sup> Harris and Lennox both relate to the same field (i.e., accessories that are used to finish drywall applications relating to vent apertures), and to a closely analogous product (a grille for use with air handling applications in walls or ceilings). (Ex. 1003, ¶ 107.) A POSITA would have been motivated to combine Lennox with Harris to produce the subject grille through an extrusion process because of the well-known economic advantages of doing so (i.e., it is typically cheaper to use extrusion to produce metal or aluminum grilles than other, alternative processes). (Ex. 1003, ¶ 108.) Indeed, Harris specifically teaches that the grille of the invention "can be constructed substantially throughout of aluminum extrusions and thus at economic advantage." (Ex. 1005 at 6:33-38.) Harris thus provides that each and every element of its air handling grille should preferably be made according to an extrusion process in order to achieve lower manufacturing costs. This is consistent

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<sup>15</sup> Nailor likewise teaches that its frame is made from "[e]xtruded aluminum." (Ex. 1006.)

with what a POSITA would have understood and expected at that time, and as reflected by other analogous patents in this field. (Ex. 1003, ¶ 108; *see also* Ex. 1011 [Pettitt] at 4:62-66.)

**2. Claim 1[a]: "a frame"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 119.) As discussed above in the context of Ground 1, Lennox discloses this limitation, because it teaches a grille for use with drywall having a frame (which is described as element 83a and depicted in Figure 12 of Ex. 1004). Harris and Nailor likewise disclose this limitation, as they also describe/depict such a frame (Ex. 1005 (element 10 in Figure 1); *see also* Ex. 1006). (Ex. 1003, ¶ 109.)

**3. Claim 1[b]: "a linear bar grille located in said frame comprised of vanes and cross members that direct a flow of air"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 110.) As discussed above in the context of Ground 1, Lennox discloses this limitation, because, as noted above, it teaches embodiments that include "hot and cold forced air grates," (ex. 1004 at 8), which would have been understood by a POSITA to include linear bar grilles, which in turn would have been understood to include "vanes and cross members that direct a flow of air." (Ex. 1003, ¶ 110.) Harris likewise teaches an extrusion grille with this

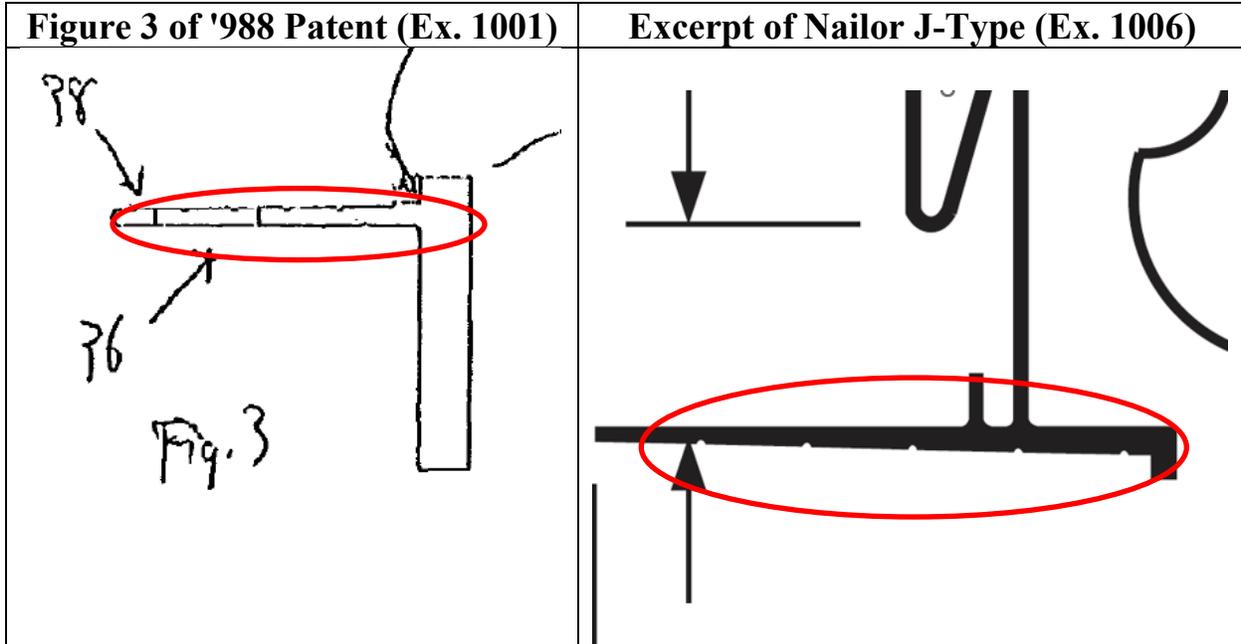
element, noting that "[a]s best illustrated in Fig. 2 . . . elongated square cross members **46,46** secure the vanes **40,40** . . . within the frame **10**." (Ex. 1005 at 3:5-22.)

**4. Claim 1[c]: "pre-perforated through holes"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 111.) Lennox discloses this limitation for the reasons discussed above in Section VI.A.4, which is incorporated into this Ground by reference.

**5. Claim 1[d]: "indented slots"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 112.) Lennox discloses this limitation for the reasons discussed above in Section VI.A.5, which is incorporated into this Ground by reference. In addition, to the extent that the Board finds that those "indented slots" are not taught by Lennox, they are taught by Nailor. (Ex. 1003, ¶ 113.) As shown by the comparison below, Nailor's J-Type drawing depicts these indented slots in precisely the same way as Figure 3 of the '988 patent:



Lennox, Harris, and Nailor all relate to the same field (i.e., accessories that are used to finish drywall applications relating to vent apertures), and to a closely analogous product (vent covers for use with air handling applications in walls or ceilings). (Ex. 1003, ¶ 114.) A POSITA would have been motivated to combine the particular indented slots taught by Nailor's J-Type embodiment with Lennox's air grate made according to the extrusion process in Harris, because it was well-known that the sort of small recesses in Nailor would have furthered Lennox's goal of "gripping the drywall compound to be applied over the corner bead and feathered over flange 50," (Ex. 1004 at 13), by increasing the surface area for that compound to attach to, as taught by multiple prior art references. (Ex. 1003, ¶ 115; *see also* Ex. 1023 [Larson] at Fig. 2, *see also id.* at 2:20-22 ("[T]he striations serve

to provide an additional high surface area to which the overapplied finishing materials can adhere."); Ex. 1024 [Davis] at [0021].)

**6. Claim 1[e]: "a flexible mounting flange located between a top and bottom edge of the frame and extending outwardly from said frame"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 115.) Lennox discloses this limitation for the reasons discussed above in Section VI.A.6, which is incorporated into this Ground by reference. Harris and Nailor likewise disclose a grille with an outwardly extending mounting flange. (*Id.*; Ex. 1005 at 2:13-15 ("The said cross sectional configuration is generally L-shaped including a laterally outwardly projecting front *flange* . . . ."); Ex. 1006.)

**7. Claim 1[f]: "said indented slots defined as small recesses in said flexible mounting flange that receive plaster, joint compound or mud"**

The combination of Lennox in view of Harris and Nailor discloses this limitation, for the reasons discussed above for Claim 1[d]. (Ex. 1003, ¶ 116.)

**8. Claim 1[g]: "said pre-perforated through holes located in the flexible mounting flange"**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 117.) Lennox discloses this limitation for the reasons discussed above in Section VI.A.8, which is incorporated into this Ground by reference.

**B. Claim 2: "The extrusion grille of claim 1 wherein said flexible mounting flange is fastened to a wall or ceiling with said pre-perforated through holes."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 118.) Lennox discloses this limitation for the reasons discussed above in Section VI.B, which is incorporated into this Ground by reference.

**C. Claim 3: "The extrusion grille of claim 1 further comprising sheet rock screws."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 119.) Lennox discloses this limitation for the reasons discussed above in Section VI.C, which is incorporated into this Ground by reference.

**D. Claim 4: "The extrusion grille of claim 3 wherein said frame is installed with said sheet rock screw before plaster or a joint compound is applied."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 120.) Lennox discloses this limitation for the reasons discussed above in Section VI.D, which is incorporated into this Ground by reference.

**E. Claim 7: "The extrusion grille of claim 1 wherein said pre-perforated mounting through holes provide multiple mounting options to address multiple field conditions."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 121.) Lennox discloses this limitation for the reasons discussed above in Section VI.E, which is incorporated into this Ground by reference.

**F. Claim 9: "The extrusion grille of claim 1 wherein said extrusion grille comprises multiple, pre-punched mounting holes for fastening in a wide range of wall conditions and materials."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 122.) Lennox discloses this limitation for the reasons discussed above in Section VI.F, which is incorporated into this Ground by reference.

**G. Claim 10: "The extrusion grille of claim 1 wherein said extrusion grille comprises multiple, pre-punched mounting holes for attachment to underlying studs (support beams)."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 123.) Lennox discloses this limitation for the reasons discussed above in Section VI.G, which is incorporated into this Ground by reference.

**H. Claim 11: "The extrusion grille of claim 1 wherein said extrusion grille comprises pre-punched holes accurately sized for standard wall board/sheet rock screws so no special hardware or tools are required."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 124.) Lennox discloses this limitation for the reasons discussed above in Section VI.H, which is incorporated into this Ground by reference.

**I. Claim 12: "The extrusion grille of claim 1 wherein said flexible mounting flange fastens said extrusion grille to uneven wall surfaces."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 125.) Lennox discloses this limitation for the reasons discussed above in Section VI.I, which is incorporated into this Ground by reference.

**J. Claim 13: "The extrusion grille of claim 1 wherein inside of said extrusion grille frame extends about  $\frac{3}{4}$ " deep into opening so that said extrusion grille is installed in a wall board or plaster ranging from about  $\frac{1}{4}$ " thru about  $\frac{3}{4}$ " thick."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 126.) Lennox discloses this limitation for the reasons discussed above in Section VI.J, which is incorporated into this Ground by reference.

**K. Claim 14: "The extrusion grille of claim 1 wherein said extrusion grille allows an installer to cut a rough hole in a wall and slip said extrusion grille frame into said hole."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 127.) Lennox discloses this limitation for the reasons discussed above in Section VI.K, which is incorporated into this Ground by reference.

**L. Claim 15: "The extrusion grille of claim 1 wherein no routing or recessed cut is necessary."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 128.) Lennox discloses this limitation for the reasons discussed above in Section VI.L, which is incorporated into this Ground by reference.

**M. Claim 16: "The extrusion grille of claim 1 wherein there is no blocking or added wood necessary for attachment to wall."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 129.) Lennox discloses this limitation for the reasons discussed above in Section VI.M, which is incorporated into this Ground by reference.

**N. Claim 17: "The extrusion grille of claim 1 wherein said extrusion grille is comprised of aluminum material."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 130.) Lennox discloses this limitation for the reasons

discussed above in Section VI.N, which is incorporated into this Ground by reference. In addition, Harris teaches an extrusion grille that is also comprised of aluminum material. (*Id.*; Ex. 1005 at 2:10-11 (noting that the "frame is of the extruded aluminum type"); *id.* at 3:1-3 ("Similarly, the mode of construction of the vanes may vary but an extruded aluminum construction is presently preferred . . . ."); *id.* at 3:59-60 ("The members **58,58** may be of extruded aluminum construction . . . ."); *id.* at 4:21-22 ("Construction of the vanes **62,62** may vary widely but aluminum extrusions are presently preferred . . . .").)

**O. Claim 18: "The extrusion grille of claim 1 wherein said extrusion grille is used with a fixed core, a core welded directly to said frame or removable core for access to controls of filtration behind said grille."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 131.) Lennox discloses this limitation for the reasons discussed above in Section VI.O, which is incorporated into this Ground by reference. In addition, as illustrated for instance in Figure 1 of Harris, the core of the extrusion grille taught by Harris can be installed using "spring clips," such that the core is "nevertheless removable from the frame on relative forward movement from the frame." (*See* Ex. 1005 at 3:23-57; *see also id.* at Fig. 1.)

**P. Claim 19: "The extrusion grille of claim 1 wherein said extrusion grille is mounted, so that the entire frame and grille are flush to a wall providing a seamless installation."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 132.) Lennox discloses this limitation for the reasons discussed above in Section VI.P, which is incorporated into this Ground by reference.

**Q. Claim 20: "The extrusion grille of claim 1 wherein said extrusion grille is mounted in only one way, so that it cannot be installed backward."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 133.) Lennox discloses this limitation for the reasons discussed above in Section VI.Q, which is incorporated into this Ground by reference. A POSITA would likewise have understood Harris to teach an extrusion grille that can be mounted on the wall only one way, so that it cannot be installed backward. (*Id.*)

**R. Claim 21: "The extrusion grille of claim 1 wherein said extrusion grille has a special angled edge that provides a step for a standard spackle knife to rest when a plaster or joint compound is being applied."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 134.) Lennox discloses this limitation for the reasons discussed above in Section VI.R, which is incorporated into this Ground by reference.

**S. Claim 22: "The extrusion grille of claim 1 wherein said extrusion grille has a special angled edge that provide a crisp, clean line set up for application of final skim coat of plaster (joint compound)."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 135.) Lennox discloses this limitation for the reasons discussed above in Section VI.S, which is incorporated into this Ground by reference.

**T. Claim 23: "The extrusion grille of claim 1 wherein said extrusion grille is flush mounted to a wall without requiring a stud."**

The combination of Lennox in view of Harris and Nailor discloses this limitation. (Ex. 1003, ¶ 136.) Lennox discloses this limitation for the reasons discussed above in Section VI.T, which is incorporated into this Ground by reference.

### **VIII. *FINTIV* FACTORS**

Petitioner respectfully submits that, consistent with the Board's precedential decision in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020), and the Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022) ("*Interim Fintiv Procedure*"), this Petition should not be denied pursuant to the Board's discretionary authority. While there is a parallel district court action involving the challenged claims, discretionary denial would not be appropriate at least because of (i) Petitioner's *Sotera* stipulation, which is dispositive on the question of

discretionary denial; (ii) the compelling evidence of unpatentability, which is separately and independently dispositive on this question; and (iii) the lack of a trial date and relatively nascent stage in the parallel district court proceedings.

**A. Whether the Court Granted a Stay or Evidence Exists That One May be Granted If a Proceeding Is Instituted**

The '988 patent is asserted in a parallel district court proceeding: *INV Holdings Inc. et al. v. Dayus Register & Grille, Inc.*, Civ. A. No. 2:21-cv-05107-GRB-ST (E.D.N.Y.) ("the Parallel Proceeding"). If this proceeding is instituted, a stay is likely to be granted. Although contested motions to stay pending IPR appear to be relatively rare in the Eastern District of New York, that Court recently granted contested motions to stay in two separate cases, even before an institution decision had been made in either case. (Exs. 1019, 1020.) This factor weighs against discretionary denial.

**B. Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision**

If this Petition is instituted, the Statutory Deadline for a Final Written Decision is likely to be roughly 18 months from the date that it was filed—i.e., roughly January 2024. By contrast, no trial date has been set in the Parallel Proceeding, and according to the most recently available statistics from March 2022 indicate that the average time-to-trial for civil cases in the Eastern District of New York is 52.5 months. (Ex. 1018.) That means that a trial would likely be

held sometime in late 2025—nearly two years after the statutory deadline that would apply to these proceedings. This factor therefore weighs strongly against discretionary denial.

**C. Investment in the Parallel Proceeding by the Court and the Parties**

As of the date of filing, the parties have engaged in very little discovery, no *Markman* briefs have been filed, no *Markman* hearing has been scheduled, and the close of fact discovery is likely more than a year away. (Ex. 1017.) This factor thus weighs strongly against discretionary denial.

**D. Overlap between Issues Raised in the Petition and in the Parallel Proceeding**

The challenged claims and the prior art cited in this Petition overlap with those in the Parallel Proceeding. However, Petitioner hereby stipulates that, if IPR is instituted on the grounds set forth in this Petition, it will not pursue in the Parallel Proceeding the specific grounds asserted in the Petition against the challenged claims, or any other ground that could have been reasonably raised in the Petition against the challenged claims. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 13-14, 19 (PTAB Dec. 1, 2020). This stipulation dispositively establishes that discretionary denial is not appropriate in this case. (Interim *Fintiv* Procedure at 3, 7-8.)

**E. Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party**

Petitioner is the Defendant in the Parallel Proceeding. While this factor weighs slightly in favor of denial, it is overcome by the other factors. (*See, e.g.,* Interim *Fintiv* Procedure at 4 ("[C]ompelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.").)

**F. Other Circumstances That Impact the Board's Exercise of Discretion, Including the Merits**

This is a critical factor in the *Fintiv* calculus, because "where the PTAB determines that the information presented at the institution stage presents a compelling unpatentability challenge, that determination alone demonstrates that the PTAB should not discretionarily deny institution under *Fintiv*." (Interim *Fintiv* Procedure.) This Petition presents a compelling unpatentability challenge. Lennox pre-dates the '988 patent's application date by nearly a decade, was not before the USPTO during prosecution of the '988 patent, and addresses the same problem (the need to provide a flush-mounted air vent grille) in exactly the same way as the challenged claims of the '988 patent. Moreover, Harris teaches a grille that is nearly identical to that of Lennox, made specifically according to an extrusion process, which it specifically teaches is a desirable process for making those sorts

of products, while Nailor discloses the precise recesses claimed in the '988 patent, used for the precise reason as those in the '988 patent.

**IX. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8(a)(1)**

**A. 37 C.F.R. § 42.8(b)(1): Real Parties-In-Interest**

Petitioner is the real party-in-interest.

**B. 37 C.F.R. § 42.8(b)(2): Related Matters**

The '988 patent is asserted against Petitioner in *INV Holdings Inc. et al. v. Dayus Register & Grille, Inc.*, Civ. A. No. 2:21-cv-05107-GRB-ST (E.D.N.Y.).

**C. 37 C.F.R. § 42.8(b)(3)-(4): Lead And Back-Up Counsel And Service Information**

Designated Counsel for Petitioner and service information is below:

<b>Lead Counsel</b>	<b>Back-Up Counsel</b>
<b>Andrew D. Gish (Reg. # 67,562)</b> GISH PLLC 41 Madison Avenue New York, New York 10010 Telephone: (212) 518-7380 andrew@gishpllc.com	<b>Edward L. Tulin (Reg. # 59,545)</b> GISH PLLC 41 Madison Avenue New York, New York 10010 Telephone: (212) 518-2332 edward@gishpllc.com

Petitioner consents to service by email at the addresses above.

**X. FEES UNDER 37 C.F.R. § 42.103**

Petition and Post-Institution fees totaling \$41,500 have been paid by electronic funds transfer.

**XI. CONCLUSION**

For the foregoing reasons, Petitioner requests that the Board institute IPR of

the challenged claims, and cancel them.

Respectfully Submitted,

Dated: August 29, 2022

/s/Andrew D. Gish

Andrew D. Gish (Reg. #67,562)

ATTORNEY FOR PETITIONER

**CERTIFICATE OF WORD COUNT UNDER 37 C.F.R. § 42.24(a)**

I, the undersigned, do hereby certify that the attached petition contains 13,806 words, as measured by the Word Count function of Microsoft Word. This is less than the limit of 14,000 words as specified by 37 C.F.R. § 42.24(a)(i).

Dated: August 29, 2022

/s/ Edward L. Tulin

Edward L. Tulin (Reg. # 59,545)

ATTORNEY FOR PETITIONER

**CERTIFICATION OF SERVICE**

The undersigned certifies service pursuant to 37 C.F.R. §§ 42.6(e) and 42.105 on the Patent Owner of a copy of this Petition for *Inter Partes* Review and supporting materials at the following correspondence address of record:

Phillip M. Weiss  
Weiss & Weiss  
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410 Jericho Turnpike  
Jericho, NY 11753

Dated: August 29, 2022

/s/ Edward L. Tulin  
Edward L. Tulin (Reg. # 59,545)

ATTORNEY FOR PETITIONER