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Paper 39
Entered: November 3, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FASTENERS FOR RETAIL, INC.,
Petitioner,

v.

RTC INDUSTRIES, INC.,
Patent Owner.

IPR2019-00994
Patent 9,895,007 B2

Before PATRICK R. SCANLON, MICHAEL L. WOODS, and JASON W. MELVIN, *Administrative Patent Judges.*

WOODS, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Fasteners for Retail, Inc., ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1, 2, 8, 10–16, 18–22, and 24–26 of U.S. Patent No. 9,895,007 B2 (Ex. 1001, "the '007 patent"). Pet. 4. We issued a decision to institute an *inter partes* review of these claims. Paper 9 ("Inst. Dec.").

After institution, RTC Industries, Inc. ("Patent Owner") filed a Patent Owner Response (Paper 14 ("PO Resp." or "Response")), to which Petitioner replied (Paper 21 ("Pet. Reply" or "Reply")). Patent Owner also filed a Sur-Reply to Petitioner's Reply. Paper 30 ("PO Sur-Reply" or "Sur-Reply").

Oral argument, or hearing, was held on August 4, 2020, and the transcript of the hearing has been entered as Paper 38.

We have jurisdiction under 35 U.S.C. § 6. Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown that claims 1, 2, 8, 10, and 11 of the '007 patent are unpatentable. Petitioner has not shown that claims 12–16, 18–22, and 24–26 of the '007 patent are unpatentable.

A. Related Proceedings

The parties represent that that the ’007 patent is at issue in *RTC Industries, Inc. v. Fasteners for Retail, Inc.*, No. 1:18-cv-02782 (N.D. Ill.), filed April 18, 2018. Pet. 2; Paper 3, 2.

The parties also represent that patents related to the ’007 patent were challenged in IPR2018-00741, IPR2018-00742, IPR2018-00743, and IPR2018-00744. Pet. 2; Paper 3, 2.

Finally, the parties represent that they are parties to related matters *RTC Industries, Inc. v. Fasteners for Retail, Inc.*, No. 1:17-cv-3595 (N.D. Ill.), filed May 12, 2017, and *Fasteners for Retail, Inc. v. RTC Industries, Inc.*, No. 1:18-cv-00861 (N.D. Ill.), filed February 2, 2018. Pet. 2; Paper 3, 2.

B. The ’007 Patent (Ex. 1001)

The ’007 patent, titled “Product Management Display System with Trackless Pusher Mechanism,” describes a merchandise display system with a divider, pusher, rail, and lock. Ex. 1001, codes (54), (57).

To illustrate the ’007 patent’s system, we first reproduce its Figure 4, below:

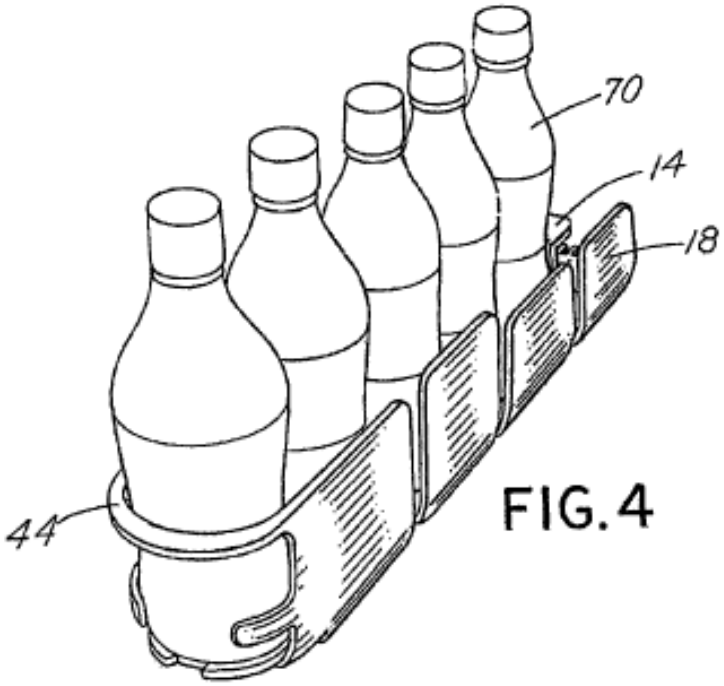


Figure 4 depicts product placed in an exemplary embodiment of the ’007 patent’s product display system. *See* Ex. 1001, 8:12–14, 17–18.

The ’007 patent further describes, in one embodiment, “a product management display system for merchandising product on a shelf [that] includes using a trackless pusher mechanism that travels along a surface on which product is placed and *one or more dividers for separating product into rows*.” Ex. 1001, 3:42–46 (emphasis added). We reproduce its Figure 46, below:

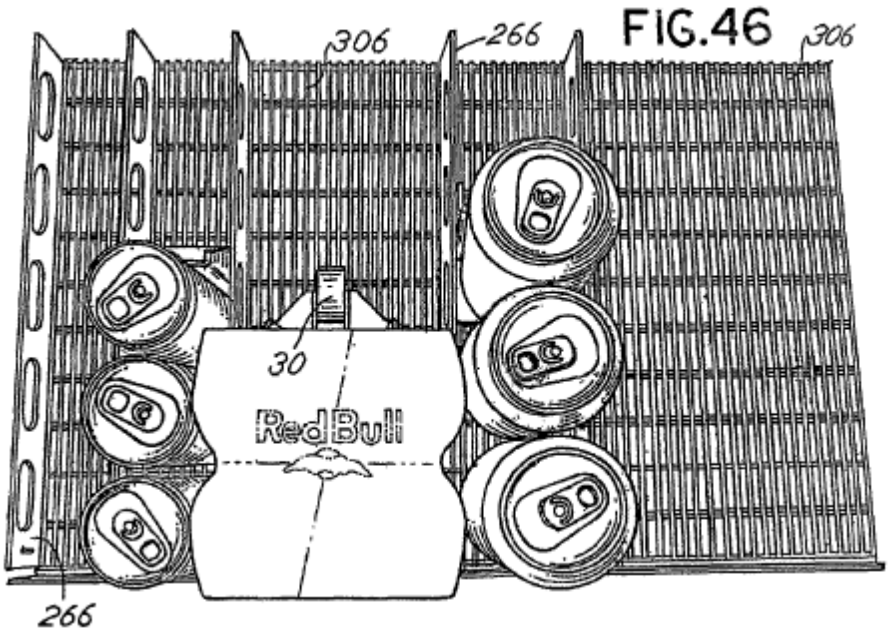


Figure 46 depicts a top view of an exemplary embodiment with different product displayed in the system. *See id.* at 9:54–56. In particular, Figure 46 depicts the product management display system loaded with product, and that dividers 266 may be adjusted to accommodate a wide variety of product. *Id.* at 22:3–6.

The ’007 patent further provides that a “front lock may be coupled to the divider” and that “the front lock may be configured to rotate, pivot or move between a first position and a second position.” Ex. 1001, 7:63–66. “When in the first position, the front lock may permit slidable movement of the divider relative to the front rail.” *Id.* at 7:66–8:1. “When in the second position, the front lock locks the divider to the front rail and prevents slidable movement between the divider and the front rail.” *Id.* at 8:2–5. To illustrate a particular embodiment of the ’007 patent’s locks, we reproduce Figure 86H, below:

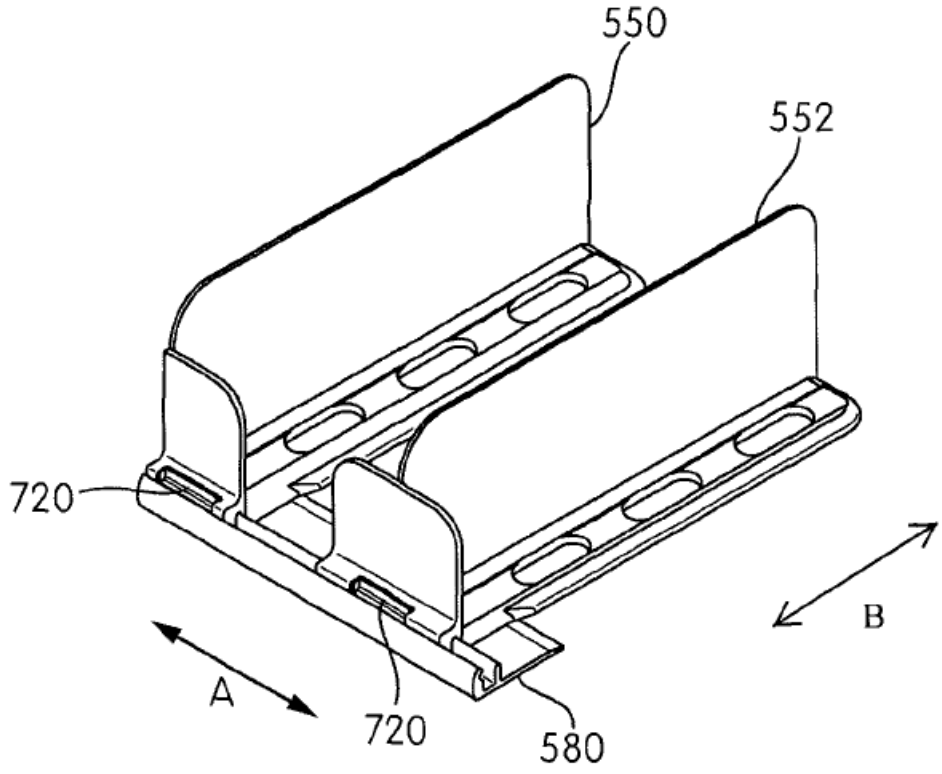


FIG. 86H

Figure 86H depicts in-part cam 720 that "serves as a lock to lock the divider or pusher to either the front rail or rear rail, or both." *Id.* at 39:52–53. When cam 720 is "moved to a locked position, [it] will lock the divider or pusher to the rail and prevent lateral movement of the divider or pusher relative to the rail." *Id.* at 39:53–56. When in the unlocked position, cam 720 "permits slidable movement of the divider or pusher relative to the rail." *Id.* at 39:56–58

C. Illustrative Claims

Claims 1, 11–13, and 19 are independent. Ex. 1001, 49:56–52:55. Independent claims 1 and 11–13 are representative of the subject matter at issue and are reproduced below, with emphases added to limitations addressed in this decision.

> 1. A merchandise display system comprising:
> a front rail that is mountable to a shelf;
> at least one divider floor configured to engage the front rail and to hold product;
> a *front end of the divider floor having a front lock*; and
> a pusher mechanism mounted to the divider floor and configured to slide along the divider floor;
> wherein the front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor,
> wherein the front lock is shiftable between a first position and a second position,
> wherein the front lock moves the divider floor out of engagement with the front rail when in the first position to permit *slidable movement of the divider floor relative to the front rail*, and
> wherein the front lock prevents slidable movement of the divider floor relative to the front rail when in the second position.
>
> 11. A merchandise display system comprising:
> a front rail that is mountable to a shelf;
> at least one divider floor configured to engage the front rail and to hold product;
> a front end of the divider floor having a front lock; and
> a pusher mechanism mounted to the divider floor and configured to slide along the divider floor,
> wherein the front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor,
> wherein the front lock is shiftable between a first position and a second position,

wherein the front lock moves the divider floor out of engagement with the front rail when in the first position to permit slidable movement of the divider floor relative to the front rail,

wherein the front lock prevents slidable movement of the divider floor relative to the front rail when in the second position, and

wherein the front rail further defines a plurality of teeth, and wherein the front lock can engage the plurality of teeth to prevent slidable movement of the divider floor relative to the front rail.

12. A merchandise display system comprising:

a front rail that is mountable to a shelf;

at least one divider floor configured to engage the front rail and to hold product;

a front end of the divider floor having a front lock; and

a pusher mechanism mounted to the divider floor and configured to slide along the divider floor,

wherein the front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor,

wherein the front lock is shiftable between a first position and a second position,

wherein the front lock moves the divider floor out of engagement with the front rail when in the first position to permit slidable movement of the divider floor relative to the front rail,

wherein the front lock prevents slidable movement of the divider floor relative to the front rail when in the second position, and

wherein the front rail further defines a tongue extending upwardly from the rail, and wherein the divider floor defines a groove for receiving the tongue when the divider floor is mounted to the front rail.

13. A merchandise display system comprising:

a front rail that is mountable to a shelf;

at least one divider floor configured to engage the front rail and to hold product and a divider wall extending upwardly from the divider floor;

a front end of the divider floor having a front lock;

a front barrier mounted to a front end of the divider, the front barrier defining a plane extending perpendicularly to both the divider floor and the divider wall; and

a pusher mechanism coupled to the divider floor,

wherein the front lock is positioned in front of the barrier and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor and without having to push back product located on the divider floor,

wherein the front lock is shiftable between a first position and a second position,

wherein the front lock when in the first position permits slidable movement of the divider floor relative to the front rail, and

wherein the front lock prevents slidable movement of the divider floor relative to the front rail when in the second position.

Id. at 49:56–50:7, 50:33–51:34 (emphases added).

D. References Relied Upon

Petitioner's challenges rely on the following references (Pet. 4–5):

Name	Reference	Ex. No.
Merit	US Pat. No. 7,395,938, iss. July 8, 2008	1004
Alves	US Pub. No. 2008/0296241, pub. Dec. 4, 2008	1005
Howerton	US Pub. No. 2005/0218094, pub. Oct. 6, 2005	1006
Bernardin	US Pat. No. 5,111,942, iss. May 12, 1992	1007
Rataiczak	US Pub. No. 2008/0017598, pub. Jan. 24, 2008	1008

E. Alleged Grounds of Unpatentability

Petitioner contends that claims 1, 2, 8, 10–16, 18–22, and 24–26 of the '007 patent are unpatentable under the following grounds:

Ground	Claim(s) Challenged	35 U.S.C. §[1]	Reference(s)/Basis
1	1, 2, 10, 12	102	Merit
2	1, 2, 10, 12	103	Merit, Alves
3	8	103	Merit, Howerton
4	8	103	Merit, Alves, Howerton
5	11	103	Merit, Rataiczak
6	11	103	Merit, Alves, Rataiczak
7	13, 14, 18	103	Merit, Bernardin
8	15, 19–21, 24–26	103	Merit, Bernardin, Rataiczak
9	16, 22	103	Merit, Bernardin, Rataiczak, Howerton
10	26	103	Merit, Alves, Bernardin, Rataiczak

Pet. 5. Petitioner also relies on the declaration testimony of Ronald B. Kemnitzer (Exs. 1002, 1025) in support of its Petition and Reply Brief. *See, e.g.*, *id.* at 10 (referencing Ex. 1002); *see also*, *e.g.*, Pet. Reply 5 (referencing Ex. 1025).

[1] Because the application from which the '007 patent issued claims priority to an application filed before March 16, 2013, the pre-AIA version of §§ 102 and 103 applies. *See* The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), effective March 16, 2013; *see also* Ex. 1001, code (60).

Patent Owner relies on the declaration testimony of Steven C. Visser (Exs. 2001, 2006). *See, e.g.*, PO Resp. iii (Exhibit List, referencing Exs. 2001, 2006).

II. ANALYSIS

A. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).

Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art: (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology, and (6) educational level of workers active in the field. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. Ltd, Inc. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Petitioner relies upon the declaration of Mr. Kemnitzer (Ex. 1002) and contends that a person of ordinary skill in the art ("POSITA") would have had "a Bachelor's degree in Engineering or Industrial Design or more than three years of experience in the design or manufacturing of mechanical display systems." Pet. 10 (citing Ex. 1002 ¶ 50).

Patent Owner does not propose a level of ordinary skill in the art. *See generally* PO Resp.

There is no evidence before us of the educational level of the inventor, rapidity with which innovations are made, or the educational level of workers active in the field.

Based on our review of the '007 patent, the types of problems and solutions described in the '007 patent and applied prior art, we adopt Petitioner's proposed level of ordinary skill in the art.

B. Claim Construction

In an *inter partes* review proceeding for a petition filed on or after November 13, 2018, a patent claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b)). This rule adopts the same claim construction standard used by Article III federal courts, which follow *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) and its progeny. Under the *Phillips* standard, the words of a claim are generally

given their "ordinary and customary meaning," which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *See Phillips*, 415 F.3d at 1312–13. "[W]here a party believes that a specific term has meaning other than its plain meaning, the party should provide a statement identifying a proposed construction of the particular term and where the disclosure supports that meaning." Office Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764 (Aug. 14, 2012).

The parties dispute construction of the claimed terms "front end," "slidable movement . . . relative to the front rail," and "front lock." PO Resp. 8–29; Pet. Reply 1–14. We address each of claimed terms, below.

1. *"front end"*

Patent Owner proposes that the claim term "front end" of the divider floor should be construed to mean the "front extremity" of the divider floor. *See* PO Resp. 22. In support of this construction, Patent Owner submits that a POSITA would understand that "front end" means "front extremity" (*id.* at 9) and that the Specification consistently uses the term "front end" to mean "front extremity" (*id.* at 16).

Petitioner, on the other hand, disagrees with Patent Owner's proposed construction that "front end" means "front extremity." *See* Pet. 11; *see also* Pet. Reply 2.

For the following reasons, we find Patent Owner's construction too narrow and not supported by the record.

First, the patent applicant chose to use the term "front end," not "front extremity," and "we construe the claim as written, not as the patentees wish

they had written it." *Chef Am. Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004). Although the '007 patent describes embodiments in which the "front end of the divider" appears to be the front extremity of the divider (*see, e.g.*, Ex. 1001, Figs. 92, 93A, 41:64–66), Patent Owner's proposed construction attempts to read limitations improperly from the Specification into the claims.

Moreover, we find at least one example within the '007 patent that uses the term "front end" interchangeably with "front portion," which conflicts with Patent Owner's proposed construction that "front end" should narrowly be construed as "front extremity." To illustrate this point, we reproduce Figures 87A and 89A of the '007 patent, below:

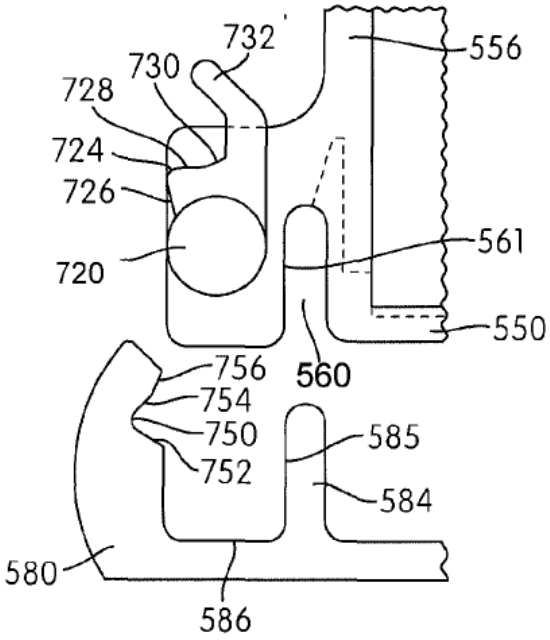


FIG. 87A

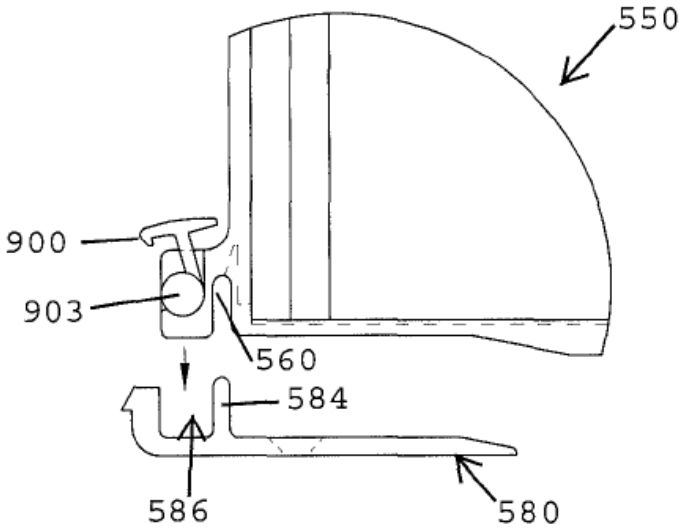


FIG. 89A

Figure 87A (reproduced at the top) is a side view of an exemplary divider and front rail. Ex. 1001, 11:44–46. Figure 89A (reproduced at the bottom) is also a side view of an exemplary divider attached to a front rail. *Id.* at 11:50–52. The Specification describes Figure 87A as depicting cam 720 "located . . . at the *front end* of the divider." *Id.* at 41:64–42:1 (emphasis added). The Specification describes Figure 89A as depicting T-lock 900 as "attached to a *front portion* of the divider." *Id.* at 47:19–20 (emphasis

added). We find that these figures depict similar locations of cam 720 and T-lock 900, yet the Specification describes cam 720 as "located . . . at the *front end*," while T-lock 900 is "attached to a *front portion*." We find the Specification's interchangeable use of "front end" and "front portion" is akin to a definition equating "front end" to "front portion." *See Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1329 (Fed. Cir. 2009) ("[I]nterchangeable use of . . . terms is akin to a definition equating the two").

Second, Patent Owner's proposed construction is at odds with the explicit language of claim 13. Claim 13 recites, *inter alia*, "a front end of the divider floor having a front lock" and "a front barrier mounted to a front end of the divider." Ex. 1001, 51:12–34. In other words, claim 13 requires the "front end" to have a "front lock" and a "front barrier." Yet, claim 13 further recites that "the front lock is positioned in front of the barrier." *Id.* If we construe "front end" to mean "front extremity," as Patent Owner proposes, we do not see how the "front lock" can be in front of the "front barrier," when both are located at the "front extremity."

Third, Patent Owner's own dictionary definition of "end" does not support its narrow construction. Patent Owner's Exhibit 2011 defines "end" in relevant part as:

> **1**. the last part or extremity, lengthwise, of anything that is longer than it is wide or broad: *the end of a street; the end of a rope*. **2**. a point, line, or limitation that indicates the full extent, degree, etc., of something; limit; bounds: *kindness without end; to walk from end to end of a city*. **3**. a part or place at or adjacent to an extremity; *at the end of the table; the west end of town*. **4**. the furthermost imaginable place or point: *an island at the very end of the world*.

Ex. 2011, 4. The first definition defines "end" as "the last part or extremity." *Id.* It does not define "end" as simply "extremity," but rather "part or extremity." *Id.* The third definition uses "the west end of town" as an example of "a part or place at or adjacent to an extremity." *Id.* We understand that the "west end of town" broadly refers to the western part or region of that town, and not just the outermost border, or "extremity," of that town.

Patent Owner also argues that if we do not construe "front end" to mean "front extremity," the claims would be indefinite. *See* PO Resp. 16. We disagree, as "a patentee need not define his invention with mathematical precision." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). Petitioner's proposed construction is definite enough.

For the foregoing reasons, we construe "front end of the divider floor" to mean the front part or portion of the divider floor. We do not construe "front end" to mean "front extremity."

2. "slidable movement . . . relative to the front rail"

Patent Owner argues that the claim limitation "slidable movement . . . *relative to* the front rail" means "slidable movement . . . *along* the front rail." *See* PO Resp. 22 (citing Ex. 2006 ¶¶ 56, 64) (emphasis omitted, emphases added). In support of this proposed construction, Patent Owner contends that the Specification "uses the term 'slidable movement' 13 times, always in a manner consistent with a ***single meaning***: slidable movement limited to movement along the longitudinal axis, or directionally, of the thing being slid upon." *Id.* at 23. Patent Owner further asserts that in each instance when the Specification refers to "slidable movement of a divider relative to a

rail," the reference is to "slidable movement ***along*** the front rail." *Id.* at 24–25.

Petitioner disagrees with Patent Owner's proposed construction. *See* Pet. Reply 12–14.

Petitioner has the better position.

As similarly explained above in connection with "front end," the patent applicant chose to use the term "slidable movement . . . *relative to* the front rail," not "slidable movement . . . *along* the front rail." "[W]e construe the claim as written, not as the patentees wish they had written it." *Chef Am. Inc.*, 358 F.3d at 1374. Indeed, the patent applicant was aware of the term "slide along" in reciting "a pusher mechanism . . . configured to *slide along* the divider floor" (Ex. 1001, 49:62 (emphasis added)), yet Patent Owner asks that we now treat "slidable . . . relative to" to mean "slide along" (PO Resp. 24–25). The different terms mean different things, and we decline to prescribe the same meaning to the terms "relative to" and "along." *See Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1348 (Fed. Cir. 2010) (noting "inference . . . that two different terms used in a patent have different meanings.").

Moreover, *even if* the Specification of the '007 patent describes embodiments in which the divider slides along the front rail, Patent Owner's proposed construction attempts to read limitations improperly from the Specification into the claims. Patent Owner's interpretation goes beyond the plain and ordinary meaning of the claimed phrase by adding limitations from particular embodiments described in the specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

The relevant language of Claim 1 merely recites, "to permit slidable movement of the divider floor relative to the front rail." Ex. 1001, 49:56–50:7. The term "relative" does not mean "along," and we do not construe "slidable movement . . . *relative* to the front rail" to mean "slidable movement . . . *along* the front rail," as Patent Owner proposes. PO Resp. 22–25.

Other than Patent Owner's proposal to require movement "along" the front rail, the parties do not dispute the construction for the slidable movement. We determine that the phrase requires no express construction.

3. "front lock"

Independent claim 1 recites "a front end of the divider floor having a front lock." Ex. 1001, 49:60. Patent Owner proposes that the claim term "front lock" means a "forwardly accessible lock." PO Resp. 29 (citing Ex. 2006 ¶ 48). Patent Owner explains that a skilled artisan "would understand that a 'front lock' does not merely mean a lock located at the front end of the divider floor, for such an interpretation would entirely read out the word 'front' from the limitation 'front lock.'" *Id.* Patent Owner contends that a skilled artisan "would understand the 'front' in 'front lock' refers to accessibility of the lock." *Id.* at 30 (citing Ex. 2006 ¶ 52). Patent Owner submits an annotated version of Figure 86H of the '007 patent (*id.* at 31), a copy of which we reproduce below:

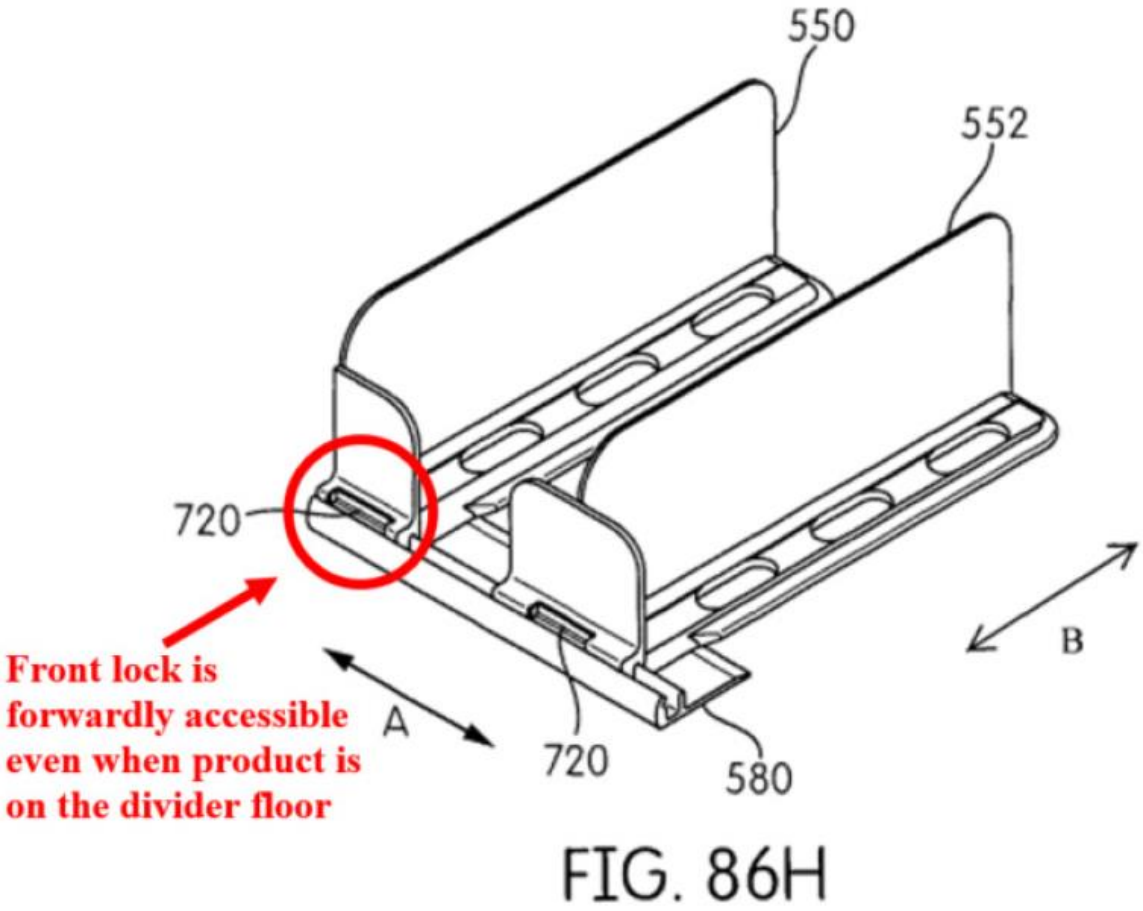


FIG. 86H

Figure 86H depicts "components of an exemplary product management display system." Ex. 1001, 11:41–43. Patent Owner's expert, Mr. Visser, testifies that this figure "shows a lock that is at the front and that is forwardly accessible even when the divider floor is full of product." Ex. 2006 ¶ 55 (referencing also annotated Figure 84D).

Petitioner, on the other hand, contends that Patent Owner's proposed construction ignores the plain meaning of the claim. *See* Pet. Reply 14.

We agree with Petitioner.

Patent Owner's proposed construction goes beyond the plain and ordinary meaning of the claimed phrase by adding limitations from

particular embodiments described in the specification into the claims. *See In re Van Geuns*, 988 F.2d at 1184.

Here, the relevant language of claim 1 simply recites "a front end of the divider floor having a front lock . . . wherein the front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor." Ex. 1001, 49:56–50:7. Although independent claim 1 requires the lock to be digitally accessible when at least some product is on the divider floor, claim 1 does not require that the front lock be accessible "when 'the divider floor . . . is *full* of product,'" as Patent Owner contends. *See* PO Resp. 29–33 (emphasis added). Although the '007 patent describes embodiments in which the lock may be accessible when the divider floor is full of product, such as in its Figure 86H, Patent Owner's proposed construction attempts to read limitations improperly from the Specification into the claims.

In other words, the word "front" does not require the lock to be "forwardly accessible." "[W]e construe the claim as written, not as the patentees wish they had written it." *Chef Am. Inc.*, 358 F.3d at 1374.

As to independent claims 1, 11, and 12, the claims expressly require the "front lock" to be "in the front of the pusher mechanism" and be "configured to be digitally accessible by a user's thumb or finger when product is on the divider floor." Ex. 1001, 49:63–50:65. Other than the express limitations, the claim term "front lock" requires no express construction.

As to independent claim 13, the claim expressly requires the "front lock" to be "positioned in front of the barrier" and is "configured to be digitally accessibly by a user's thumb or finger when product is on the

divider floor and without having to push back product located on the divider floor." *Id.* at 51:22–26. Other than the express limitations, the claim term "front lock" requires no express construction.

As to independent claim 19, the claim expressly requires the "front lock" to be "in front of the product on the divider floor" and to be "configured to be digitally accessible by a user's thumb or finger when product is on the divider floor and without having to push back product located on the divider floor." *Id.* at 52:3–7. Other than the express limitations, the claim term "front lock" requires no express construction.

4. Other Claim Terms

We determine that no other claimed limitation requires express construction for purposes of this Decision.

C. Principles of Law

"In an . . . [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

Petitioner's challenges are based on anticipation and obviousness. Pet. 5.

As to anticipation, "[a] prior art reference anticipates a patent's claim under § 102(b) if it 'discloses each and every element of the claimed invention arranged or combined in the same way as in the claim.'" *Monsanto Tech. LLC v. E.I. DuPont de Nemours & Co.*, 878 F.3d 1336,

1342–43 (Fed. Cir. 2018) (quoting *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016)).

As to obviousness, a claim is unpatentable as obvious under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham*, 383 U.S. at 17–18.

D. Ground 1 – Claims 1, 2, 10, and 12 as Anticipated by Merit

Petitioner contends that claims 1, 2, 10, and 12 are anticipated by Merit. Pet. 25.

1. Merit (Ex. 1004)

Merit is a U.S. Patent titled "Method and Apparatus for Selective Engagement of Shelf Divider Structures Within a Shelf Management System." Ex. 1004, code (54). We reproduce Figure 1 of Merit, below, to illustrate its shelf management system.

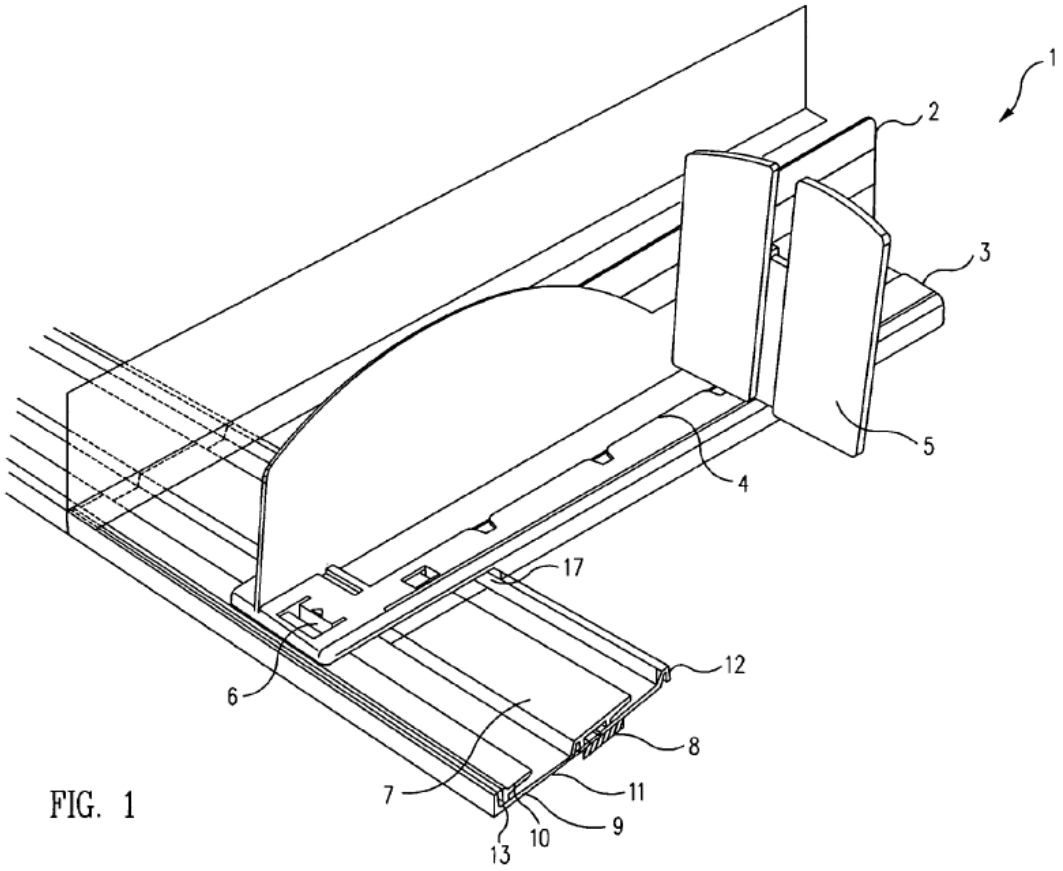


FIG. 1

Figure 1 depicts "a shelf divider structure in a shelf management system according to the present invention" of Merit. *Id.* at 2:43–45. In particular, Figure 1 depicts divider system 1 with vertical divider wall 2 and horizontal divider base 3. *Id.* at 3:22–24. Base 3 includes an L-shaped extension with protrusion 15 (shown in Fig. 4) and recess 17 that "cooperatively engage with and lock onto a generally horizontal mounting member 7 . . . [which] is attached to a shelf" not shown. *Id.* at 3:28–33.

Merit further discloses

> As a feature of this invention, it is possible to reposition a divider laterally along a shelf merely by pressing down on a resilient extension (i.e. a resilient "latch") from the divider base to unlock the base from the mounting member, push back on the divider to remove the latch from a slot in the mounting member, slide the divider and base laterally left or right along the shelf until the

> new position of the divider is reached, and then pull the divider and base forward to reinsert the latch from the base into a slot on the mounting member and cause a protrusion on the extension from the base to catch (i.e. lock) against another protrusion on a surface of the slot in the mounting member.

Id. at 2:17–28.

2. Claim 1

a) Petitioner's Challenge

In challenging independent claim 1, Petitioner submits that Merit discloses the claimed "merchandise display system," relying on annotated versions of Merit's figures and multiple citations to Merit, and supports its assertions through citations to Mr. Kemnitzer's declaration testimony. *See* Pet. 25–39.

To address the claimed "*front rail that is mountable to a shelf*," Petitioner submits an annotated version of Merit's Figure 9, which we reproduce below:

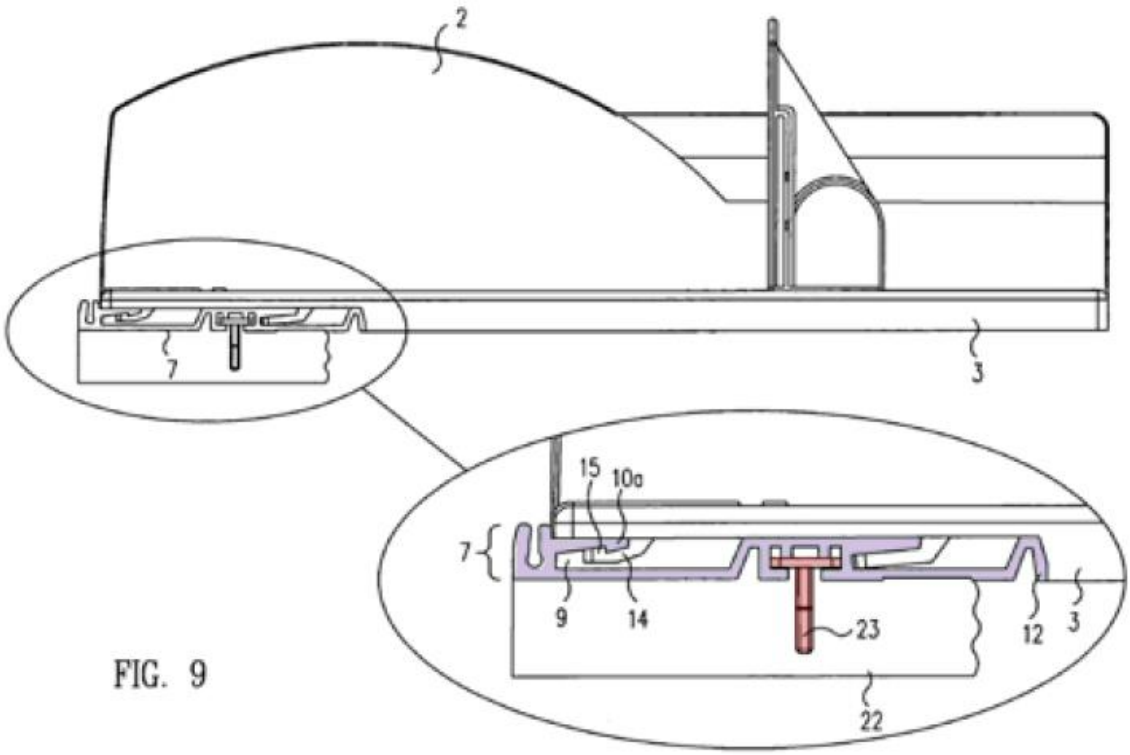


FIG. 9

According to Petitioner, annotated Figure 9 depicts mounting member 7—the claimed "front rail," shown in purple—with bolt 23 (shown in red) for attaching "front rail" 7 to an underlying shelf. Pet. 26 (citing Ex. 1004, 3:13–14).

Petitioner also submits an annotated version of Merit's Figure 8 to further illustrate this structure, which we reproduce, below:

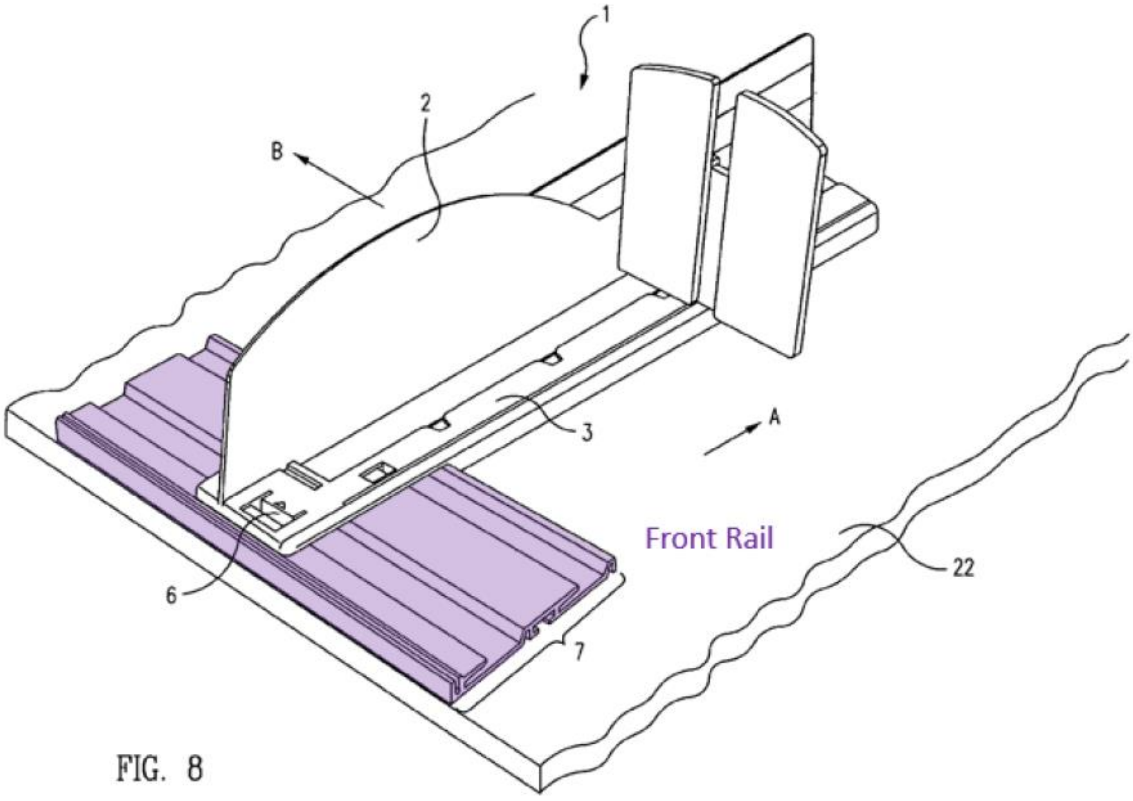


FIG. 8

According to Petitioner, annotated Figure 8 depicts "front rail" 7 (annotated in purple by Petitioner) located at the front of "shelf" 22. Pet. 27 (citing Ex. 1002 ¶ 90).

To address the claimed "*at least one divider floor configured to engage the front rail and to hold product*," Petitioner submits annotated versions of Merit's Figures 5A and 5B, which we also reproduce, below:

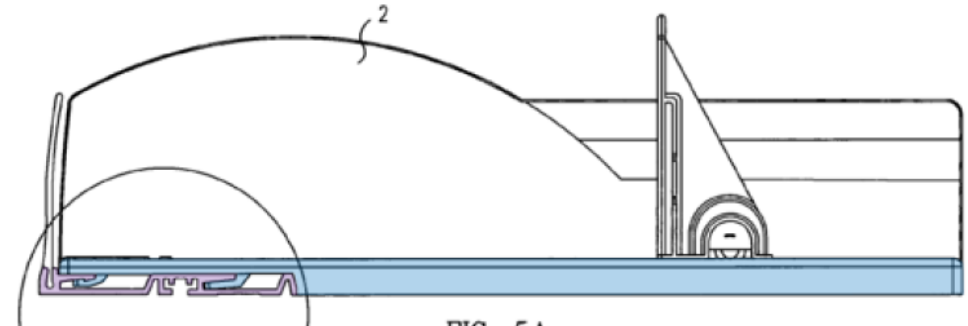


FIG. 5A

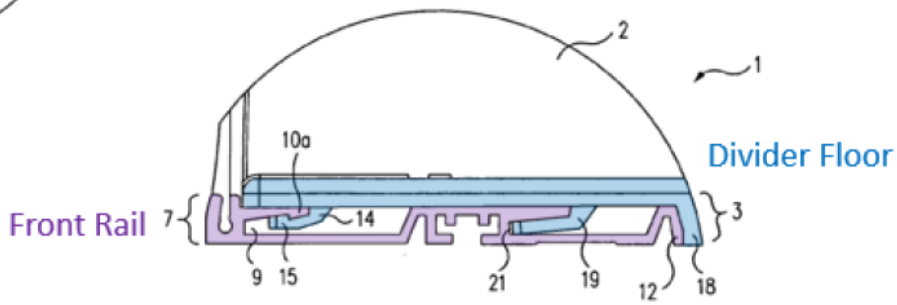
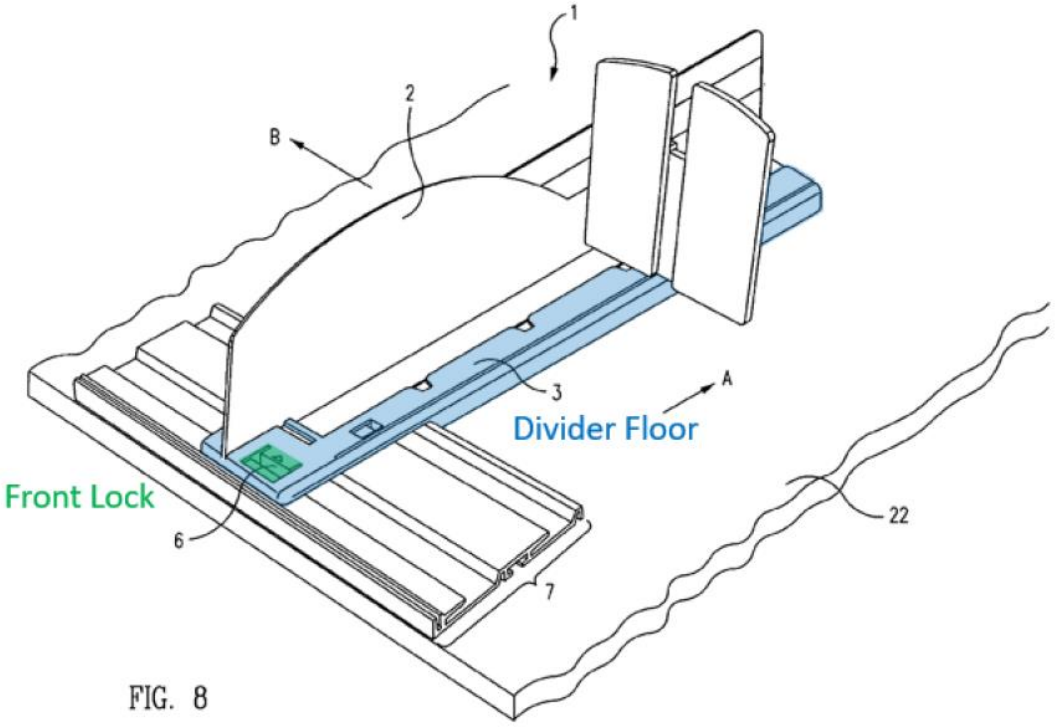


FIG. 5B

According to Petitioner, Figures 5A and 5B depict Merit's "engaged divider member and mounting member." Pet. 28 (quoting Ex. 1004, 2:55–57).

Petitioner further cites to Merit's disclosure that "the divider structure comprises a pusher track and a spring urged pusher assembly to automatically push merchandise to the front of the shelf." Pet. 28 (quoting Ex. 1004, code (57)); *see also* Ex. 1004, 4:10–14 ("Pusher 5 is able to slide along base 3 in a manner well known in the art, to cause the articles stacked or arrayed in front of pusher 5 to move along base 3 toward the front of the shelf 22.")

To address the claimed "*a front end of the divider floor having a front lock*," Petitioner submits an annotated version of Merit's Figure 8, which we reproduce, below:



According to Petitioner, annotated Figure 8 depicts a green front lock and a blue divider floor, specifically, "divider 2 and base 3 using the latching and locking structure of this invention showing the opening 6 in the base 3 through which a person is able to unlock the base 3 from the mounting member 7." Pet. 29 (quoting Ex. 1004, 3:7–12).

Petitioner further submits an annotated version of Merit's Figures 5A and 5B to further illustrate Merit's "lock," which we reproduce, below:

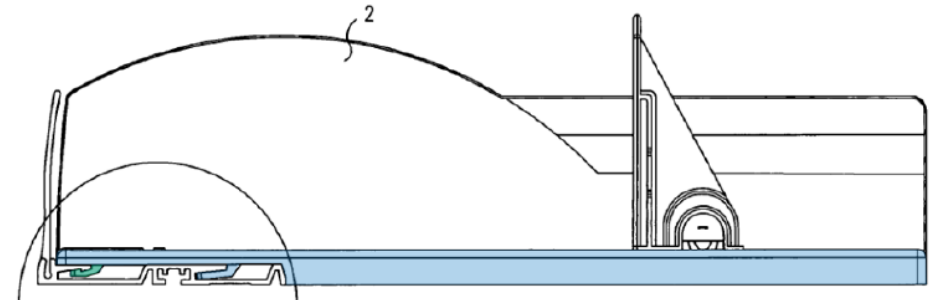


FIG. 5A

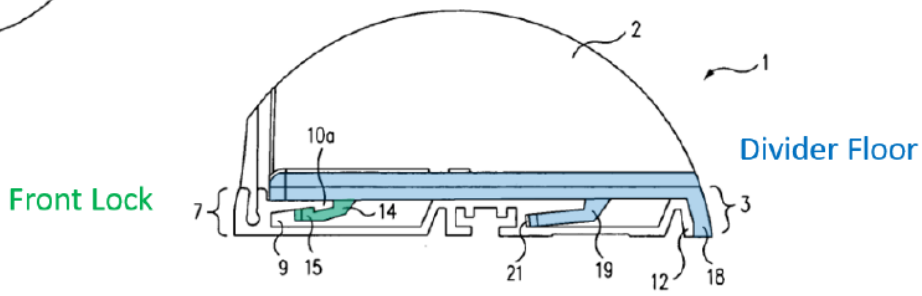


FIG. 5B

According to Petitioner, "FIG. 5A shows . . . the latching and locking structure of one embodiment when divider 2 is mounted on base 3 and extension 14 is fully inserted in slot 9, such that protrusion 15 on extension 14 locks in place base 3 on mounting member 7." Pet. 30 (quoting Ex. 1004, 5:17–21) (alteration in original).

To address the claimed "*pusher mechanism mounted to the divider floor and configured to slide along the divider floor*," Petitioner submits an annotated version of Merit's Figure 1, which we reproduce, below:

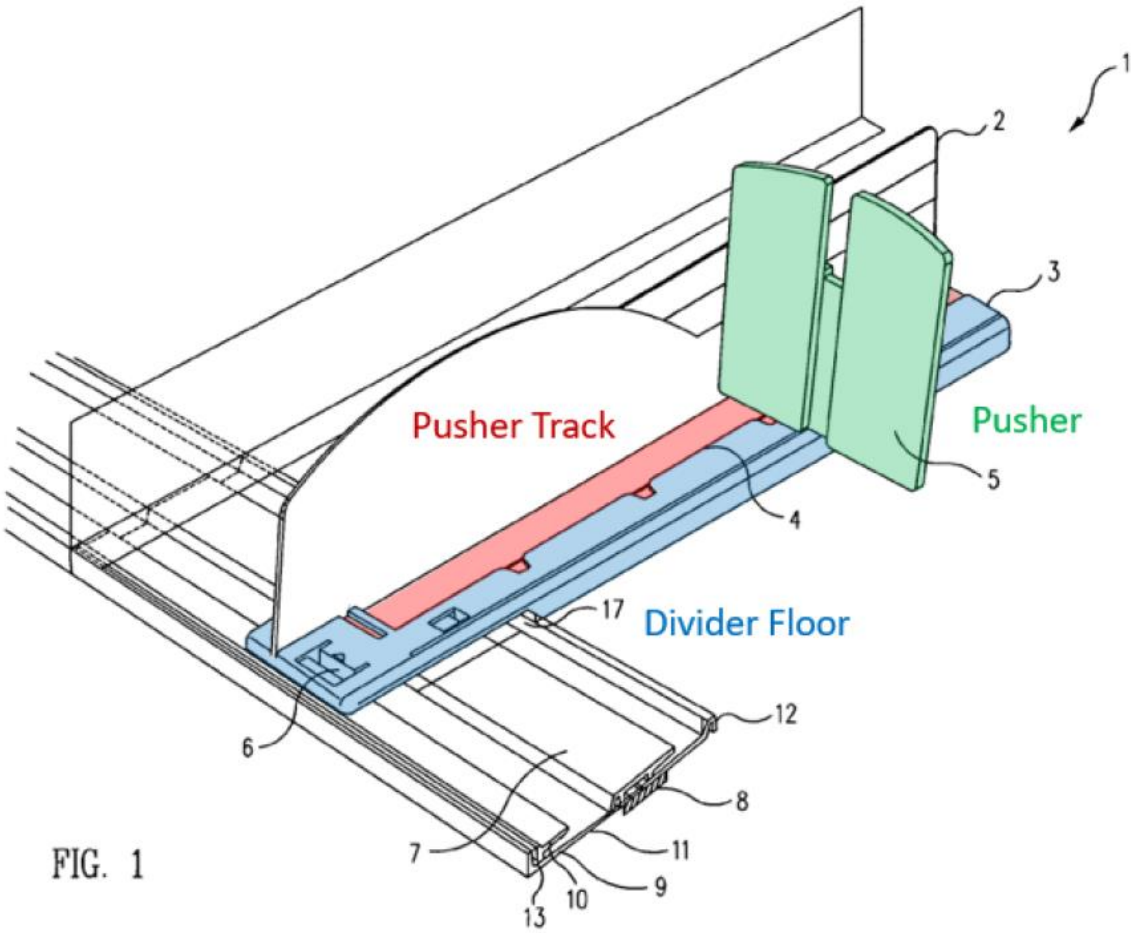


FIG. 1

According to Petitioner, annotated Figure 1 depicts green pusher mechanism 5 mounted to the blue divider floor and configured to slide along a red pusher track in the divider floor. Pet. 31.

To address the claimed "*wherein the front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor*," Petitioner submits an annotated version of Merit's Figure 2, which we reproduce, below:

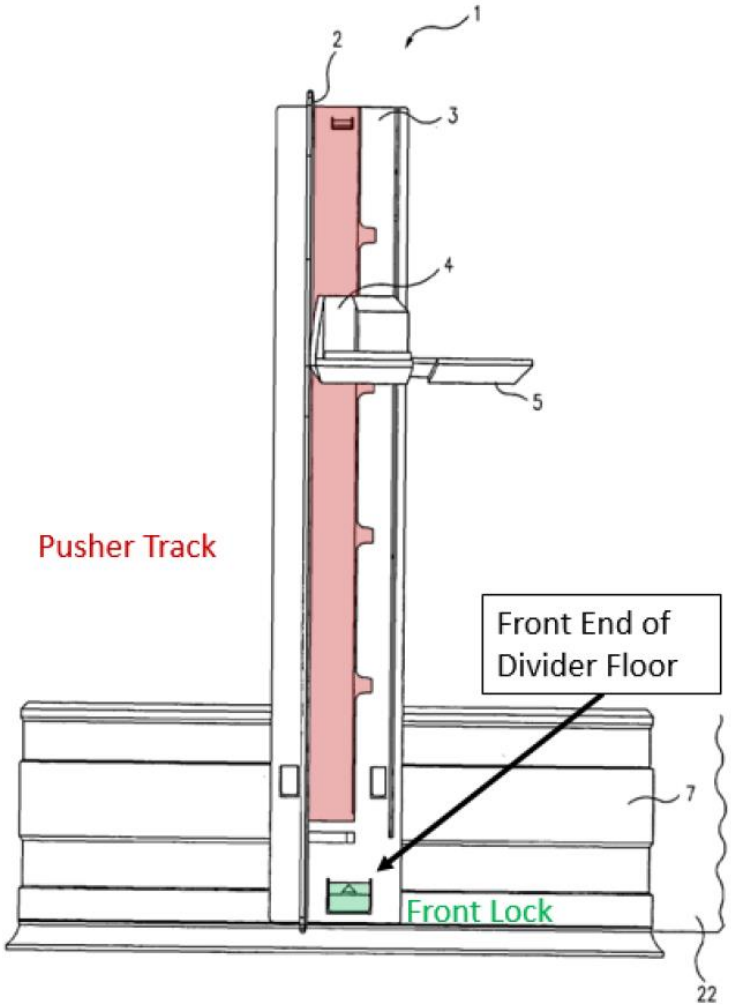


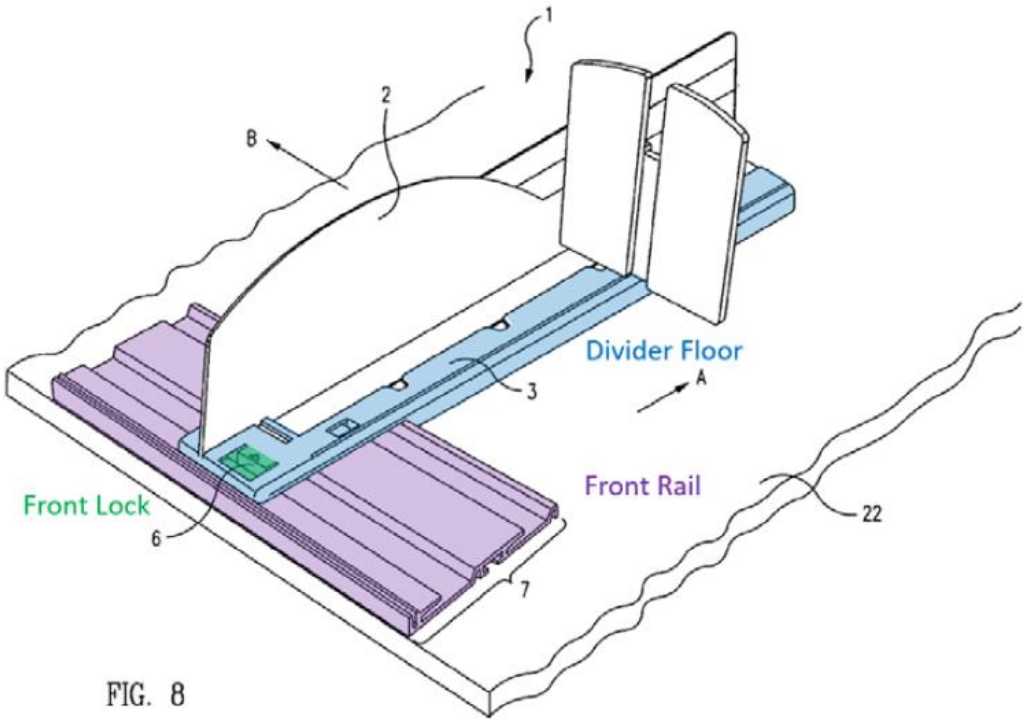
FIG. 2

According to Petitioner, and as shown in annotated Figure 2, Merit discloses its front lock (green) at the front end of the divider floor. Pet. 32 (citing Ex. 1002 ¶ 104). Mr. Kemnitzer testifies that it is his opinion that "a POSITA would understand that the pusher 5 of Merit is restrained from forward motion by the end of the pusher track, such that the pusher mechanism 5 never passes in front of the front lock access opening highlighted in green in Figure 2." Ex. 1002 ¶ 104. Mr. Kemnitzer further testifies that "the lock of Merit is always in front of the pusher mechanism of Merit." *Id.*

To address the claimed "*wherein the front lock is shiftable between a first position and a second position*," Petitioner cites to Merit's disclosure

that "opening 6 is provided in the front of base 3 to allow a clerk, or another person, to place fingers in the opening and push down on portion 14a of extension 14." Pet. 34 (quoting Ex. 1004, 4:35–38). Mr. Kemnitzer testifies that a "POSITA would understand that 'pushing down on' the resilient extension 14 necessarily moves the extension 14 from a second position (locked) to a first position (unlocked)." Ex. 1002 ¶ 107.

To address the claimed "*wherein the front lock moves the divider floor out of engagement with the front rail when in the first position to permit slidable movement of the divider floor relative to the front rail*," Petitioner submits an annotated version of Merit's Figure 8, which we reproduce, below:



According to Petitioner, and as shown in annotated Figure 8, "arrows 'A' and 'B' depict[] directions in which the divider can be slid when it is unlocked." Pet. 37–38 (citing Ex. 1004, 5:53–63). Petitioner cites to

Merit's disclosure that "divider 2 and base 3 are ***easily slid back*** . . . away from the front of the shelf and ***then can be laterally moved along the shelf*** to allow a different sized article to be displayed using divider 2 and base 3," when the user places his or her "fingers in the opening and push[es] down on portion 14a of extension 14." *Id.* at 37 (citing Ex. 1004, 4:35–42, code (57)).

To address the claimed "*wherein the front lock prevents slidable movement of the divider floor relative to the front rail when in the second position*," Petitioner submits an annotated version of Merit's Figure 5B, which we reproduce, below:

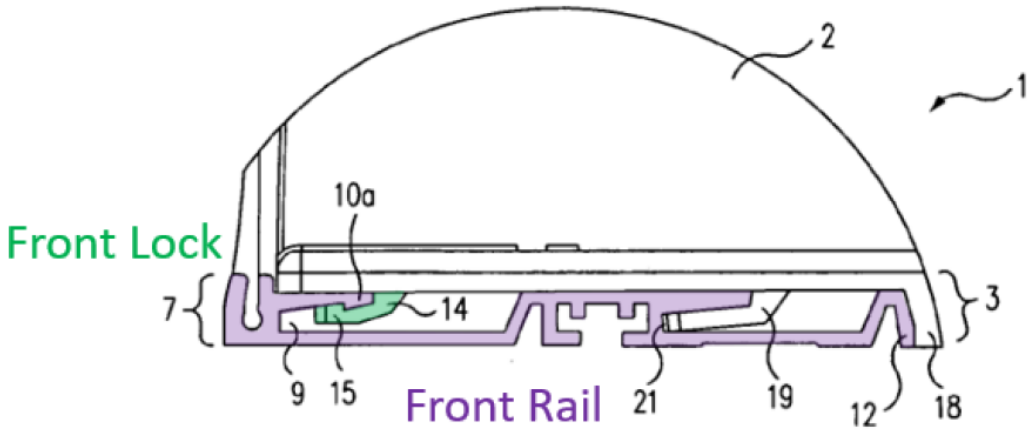


FIG. 5B

According to Petitioner, and as shown in annotated Figure 5B, "[o]nce protrusion 15 is to the left of protrusion 10a, portion 14a of extension 14 snaps upward vertically causing protrusion 15 to be held in position by protrusion 10a, on extension 10, of the mounting member 7, thereby locking base 3 and divider 2 in position." Pet. 38–39 (quoting Ex. 1004, 4:51–55). Mr. Kemnitzer testifies that "the front lock of Merit, when it locks into a second position, prevents movement of the divider both laterally along the

front rail and rearwardly (that is, toward the back of the shelf)." Ex. 1002 ¶ 113.

b) Patent Owner's Arguments

Patent Owner presents the following three arguments in response to Petitioner's challenge of claim 1:

> (1) Merit fails to disclose the claimed "front end of [a] divider floor having a front lock." PO Resp. 33.
>
> (2) Merit fails to disclose a "front lock [that] is in front of [a] pusher mechanism." *Id.* at 78.
>
> (3) Merit fails to disclose a "front lock [that] permit[s] slidable movement of the divider floor relative to the front rail." *See id.* at 85.

We address Patent Owner's three arguments separately, below.

c) "front end of [a] divider floor having a front lock"

Patent Owner contends that Merit does not disclose a "front end of [a] divider floor having a front lock," because Merit's "lock" is "set back from" Merit's "front end" and is not "forwardly accessible." *See* PO Resp. 33. In support of this assertion, Patent Owner submits an annotated version of Merit's Figure 5B (*id.* at 34), which we reproduce, below:

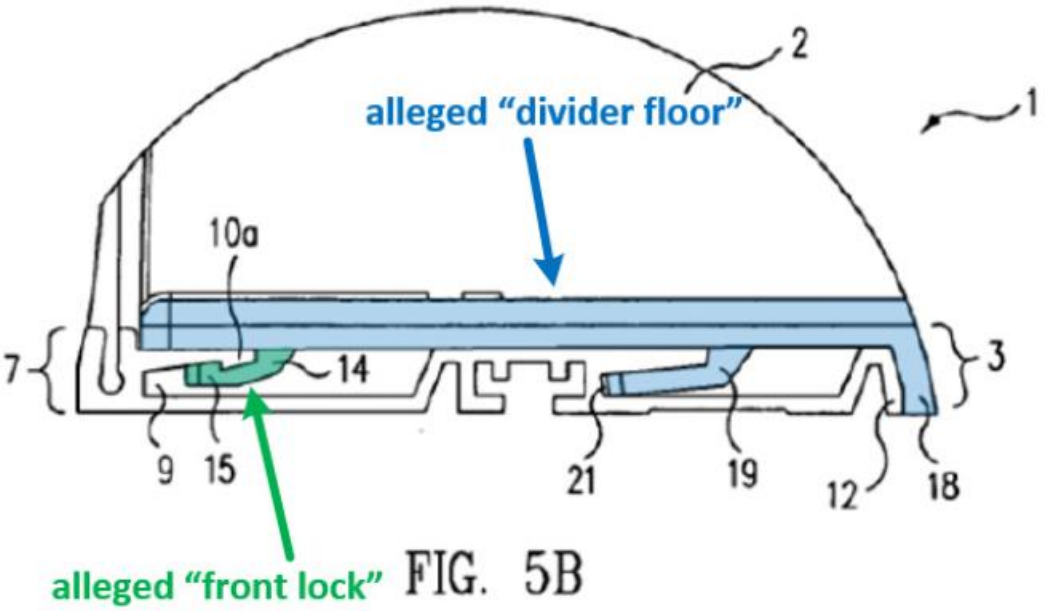


FIG. 5B

Ex. 1004, Fig. 5B (annotated)

Figure 5B illustrates an engaged divider base member and mounting member of Merit's shelf management system. Ex. 1004, 2:58–61. According to Patent Owner, Figure 5B depicts Merit's extension 14 (the claimed "front lock") as being set back from the *front extremity* of Merit's base 3. PO Resp. 34 (citing Ex. 2006 ¶¶ 82–85, 88).

Patent Owner also reiterates its claim construction position that a skilled artisan "would understand 'front lock' to mean a '*forwardly accessible lock'* in the context of the '007 Patent." PO Resp. 38 (emphasis added).

Patent Owner's arguments are not persuasive, as they are premised on erroneous constructions of claim 1.

As discussed above, we disagree with Patent Owner's proposed construction that "front end" means "front extremity" (*supra* Part II.B.1) and that "front lock" means "forwardly accessible lock" (*supra* Part II.B.3). Rather, we construe "front end of the divider floor" to mean the front part or portion of the divider floor. *Supra* Part II.B.1. Also, the claim does not

recite that the "front lock" be "forwardly accessible," it instead requires that the "front lock" be "configured to be digitally accessible by a user's thumb or finger when product is on the divider floor." *Supra* Part II.B.3; Ex. 1001, 50:63–65.

We agree with Petitioner that Merit discloses the claimed structure, and we credit Mr. Kemnitzer's testimony in support of these findings. Ex. 1002 ¶¶ 102–105. To illustrate, we reproduce Merit's annotated Figure 2, which Mr. Kemnitzer cites to (*id.* ¶ 103), below:

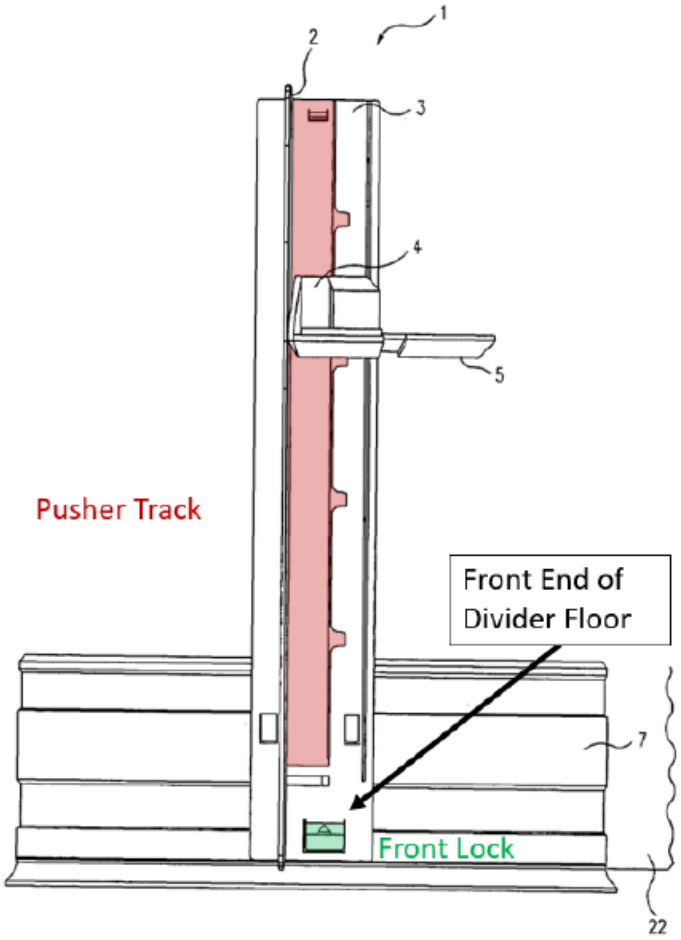


FIG. 2

Figure 2 is a plan view of Merit's shelf divider structure of a shelf management system. Ex. 1004, 2:46–47. Mr. Kemnitzer testifies that Figure 2 depicts the front lock (highlighted in green) located at the front end

of the divider floor. Ex. 1002 ¶ 104. We agree and credit Mr. Kemnitzer's testimony as to this finding.

Mr. Kemnitzer further testifies that Merit's "front lock" is "configured to be digitally accessible by a user's thumb or finger when product is on the divider floor." *Id.* ¶ 105 (citing Ex. 1004, 4:35–38).

Indeed, Merit discloses that "opening 6 is provided in the front of base 3 to allow a clerk, or another person, to place fingers in the opening and push down on portion 14a of extension 14." Ex. 1004, 4:35–38. Merit further discloses, "[a]n advantage of this invention is that the divider system 1 can be reoriented laterally along the shelf *without removing articles stored on the shelf 22*." *Id.* at 5:64–66 (emphasis added); *see also id.* at 6:58–63. Merit further discloses,

> [L]atching and locking mechanism for a . . . combination divider and spring urged pusher structure, or a divider base, which allows convenient engagement, release and re-engagement of the relevant structure to a mounting member that is securable to the front edge of a shelf without necessitating removal of the displayed articles from the shelf.

Id. at 1:57–63. We find Merit's disclosure to satisfy the claimed limitation.

For the foregoing reasons, we find that Merit discloses a "front end of the divider floor having a front lock." We further find that Merit's "front lock is in front of the pusher mechanism and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor," as required by claim 1.

d) "front lock [that] is in front of [a] pusher mechanism"

Patent Owner also argues that Merit fails to disclose a "front lock" that is "in front of the pusher mechanism," as required by claim 1. *See* PO Resp. 78. In support of this argument, Patent Owner contends that "Merit does not expressly teach that its pusher mechanism stops behind its 'extension 14'—the alleged front lock." *Id.* (citing Ex. 2006 ¶¶ 115–116).

Petitioner replies that "Merit's front lock is in front of the pusher in all [of Merit's] figures." Pet. Reply 37.

We agree with Petitioner's assertion that Merit discloses the claimed structure.

Patent Owner's argument is premised on a construction of the claim limitation that the "front lock" must be in front of the pusher mechanism *at all times*. *See* Pet Reply 37 (confirming the same). Yet, claim 1 does not require this structure.

Moreover, and *even if* Merit required this structure, which it does not, we find that Merit's front lock is always in front of its pusher. We find persuasive Mr. Kemnitzer's testimony that "[a]lthough it is not required by the claims . . . a POSITA reviewing Merit would understand that the pusher paddle never travels in front of the front lock of Merit." Ex. 1025 ¶ 129; *see also id.* ¶¶ 130–133 (explaining the same). To illustrate this point, we reproduce Merit's annotated Figures 1 and 7 (*id.* ¶ 131), below:

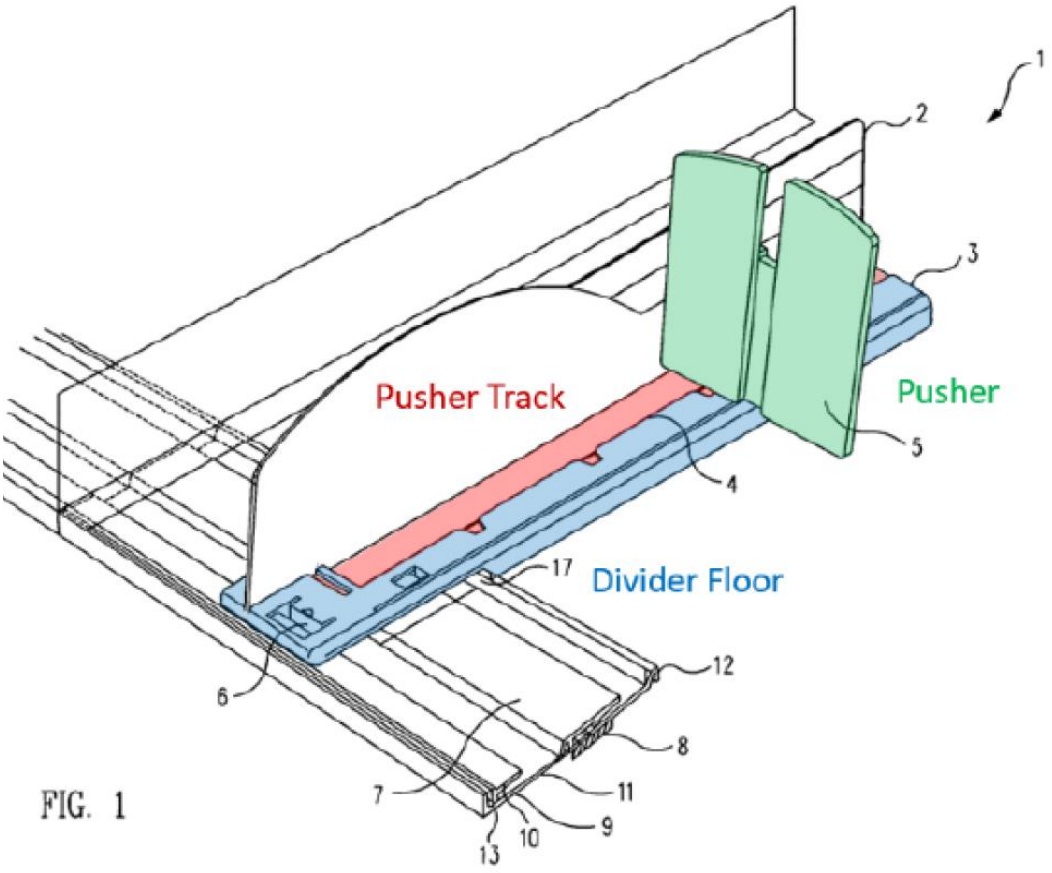
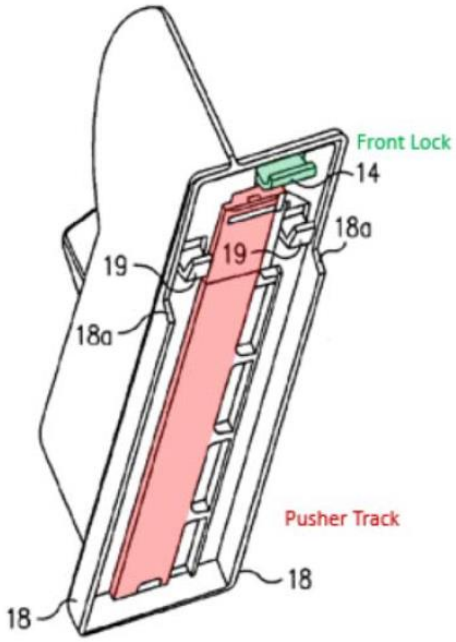

1
2
3
Pusher Track
Pusher
5
4
17
Divider Floor
12
6
8
7
11
9
10
13

FIG. 1


Front Lock
14
18a
19
19
18a
Pusher Track
18
18

Merit's Figure 1 (top figure) is a top perspective view of Merit's shelf divider structure. Ex. 1004, 2:43–44. Merit's Figure 7 (bottom figure) depicts an underside perspective of Merit's shelf divider. *See id.* at 3:3–4.

Mr. Kemnitzer testifies that these figures

> show that the pusher track is recessed below the divider floor. Further, the pusher track includes a vertical wall at its front edge that creates a stop well behind the locking mechanism. Therefore, the pusher track provides a "mechanical stop" that would prevent the pusher from moving past the pusher track.

Ex. 1025 ¶ 132. We agree with and credit Mr. Kemnitzer's testimony as to this finding.

For the foregoing reasons, we find that Merit discloses a "front lock [that] is in front of the pusher mechanism," as required by claim 1.

e) "front lock [that] permit[s] slidable movement of the divider floor relative to the front rail"

Patent Owner argues that Merit fails to disclose a "front lock" that "permit[s] slidable movement of the divider floor relative to the front rail." *See* PO Resp. 86. Patent Owner bases its argument on its proposed claim construction that a skilled artisan "would understand 'slidable movement . . . ***relative*** to the front rail' to mean 'slidable movement . . . ***along*** the front rail.'" *Id.* (alterations in original).

Patent Owner's argument is not persuasive, as it is premised on the wrong claim construction. *See supra* Part II.B.2; *see also* Pet. Reply 39 (arguing the same).

We agree with Petitioner that Merit discloses the claimed structure. We credit the testimony of Mr. Kemnitzer that "Merit discloses a 'front

lock' that 'permit[s] slidable movement of the divider floor relative to the front rail.'" Ex. 1025 ¶ 139 (alteration in original); *see also* Ex. 1002 ¶¶ 109–111 (testifying to the same). Indeed, Merit discloses that "pushing down on portion 14a of extension 14 . . . disengage[s] the divider 2 from mounting member 7." Ex. 1004, 5:53–57. Petitioner's and Patent Owner's experts appear to agree that when Merit's "front lock" 14 is no longer in a state of interference, surfaces 18a and 12a are no longer in frictional engagement, and Merit's base 3 moves relative to its mounting member 7. *See* Ex. 1025 ¶ 141 (Mr. Kemnitzer testifying to the same); *see also* Ex. 2006 ¶¶ 169–170 (Mr. Visser testifying to the same).

For the foregoing reasons, we find that Merit discloses a "front lock [that] permit[s] slidable movement of the divider floor relative to the front rail when in the second position," as required by claim 1.

f) Summary of Claim 1

We are persuaded by Petitioner's argument and evidence, and find that Petitioner has established by a preponderance of the evidence that Merit discloses all of the limitations of claim 1, for the reasons stated by Petitioner in the Petition, which we adopt as our own findings, as further supported by the declarations of Mr. Kemnitzer.

3. Claim 2

Claim 2 depends from claim 1 and further requires, "wherein the front lock defines a cam surface that engages and disengages with the front rail." Ex. 1001, 50:8–10.

To address this claim, Petitioner submits that Merit discloses this limitation, with the cam surface being "protrusion 15 on extension 14." Pet. 39–40 (citing Ex. 1004, 4:46–51). Merit states, "Once protrusion 15 is to the left of protrusion 10a, portion 14a of extension 14 snaps upward vertically causing protrusion 15 to be held in position by protrusion 10a, on extension 10, of the mounting member 7, thereby locking base 3 and divider 2 in position." Ex. 1004, 4:51–55.

As to claim 2, Patent Owner does not present additional arguments beyond those presented to its independent claim 1. *See* PO Resp. 33–93.

We are persuaded by Petitioner's argument and evidence, and find that Petitioner has established by a preponderance of the evidence that Merit discloses the limitations of claim 2 for the reasons stated by Petitioner in the Petition, which we adopt as our own findings, as further supported by the testimony of Mr. Kemnitzer.

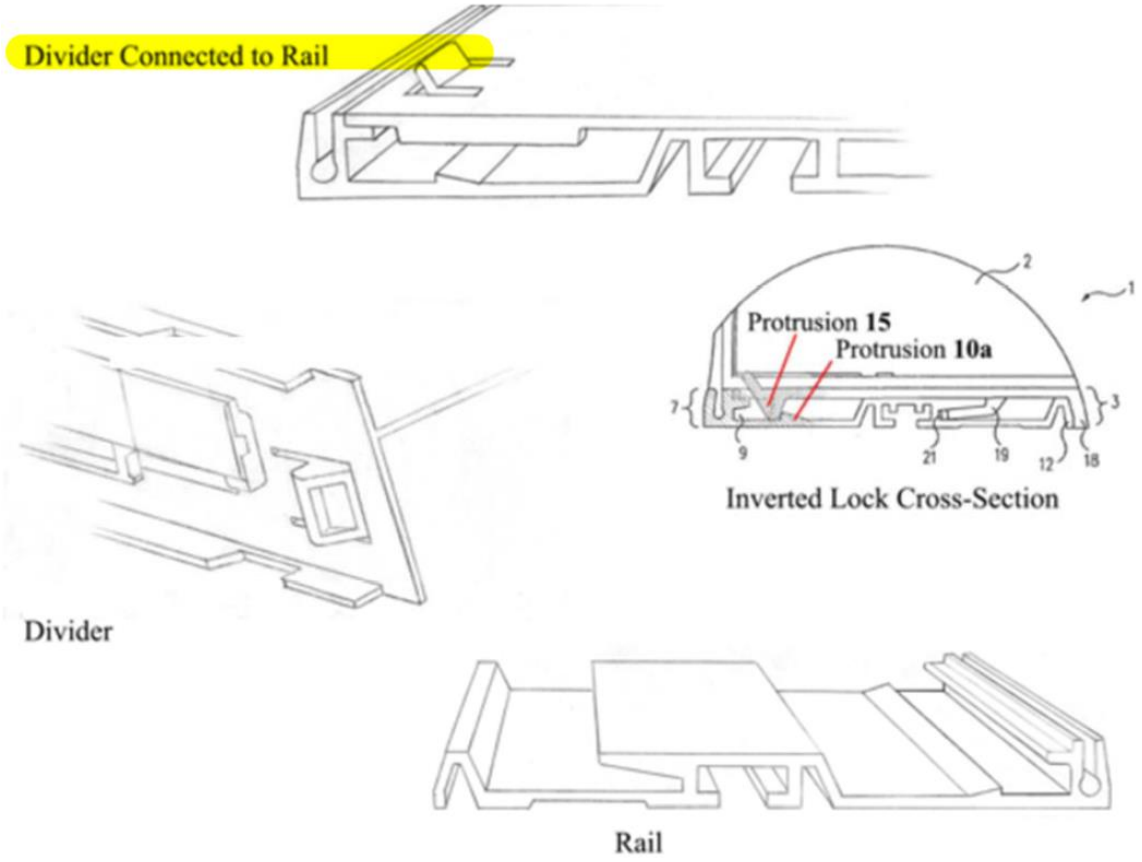
4. Claim 10

Claim 10 depends from claim 1 and further requires, "wherein the front lock defines a portion that extends upwardly from the divider floor." Ex. 1001, 50:30–32.

To address this claim, Petitioner submits that Merit discloses this limitation. Pet. 40. Petitioner cites to Merit's disclosure of a "ring or other type of pull (such as a 'T' member) [that] is attached to extension 14a to allow extension 14a to be pulled up to release base 3 from member 7." *Id.* at 41 (quoting Ex. 1004, 6:44–48). Petitioner explains that "[i]n order for the lock to be 'pulled up' to 'release' the base 3 from the member 7 as described in Merit at 6:44–48, the locking tab would need to be on top of base 3 and extend upwardly therefrom." *Id.*

Patent Owner argues that Petitioner has failed to show that Merit discloses this limitation. *See* PO Resp. 82. Patent Owner asserts that Merit "never states that the 'pull'—or any other part of extension 14—'extends upwardly' from the floor of base 3." *Id.* at 83 (citing Ex. 1004, 6:44–50). Patent Owner further asserts that Merit does not depict a pull or extension that extends upwardly from the floor of base 3. *See id.* Patent Owner's expert, Mr. Visser, testifies, "[i]f any part of extension 14 extended upwardly from the floor of base 3, it would interfere with product being pushed by Merit's pusher 5 toward the front of the shelf." Ex. 2006 ¶ 133.

We agree with Petitioner that Merit discloses the claimed structure. In response to Patent Owner's argument, Petitioner submits four annotated figures to depict the structure described in Merit (Pet. Reply 41), which we reproduce, below:



The four figures shown above depict: an isometric partial view of a divider connected to a rail (top); an isometric partial view of a divider (mid-left); an isometric view of a rail (bottom); and a partial side view of the divider engaged with the rail (mid-right). Mr. Kemnitzer testifies that these figures illustrate what a skilled artisan would understand in reading Merit's disclosure. *See* Ex. 1025 ¶ 143. In particular, Mr. Kemnitzer testifies that a skilled artisan would understand that "by inverting the structure and motion of extension 14, a portion of Merit's lock would extend upwardly from the base to allow a user to actuate a lock." *Id.*; *see also supra* p. 40 (reproducing Figure 7, which depicts "front lock" 14).

In response to Mr. Visser's testimony that the location of the lock would interfere with product sitting on the shelf, Mr. Kemnitzer disagrees,

testifying that a skilled artisan "would recognize that Merit's inverted lock could extend only a small distance above the divider floor, be close to the barrier, and angle forward such that it would not interfere with product being pushed." Ex. 1025 ¶ 144.

Having reviewed Merit's disclosure at lines 44–50 of column 6 and after weighing the competing testimony of Patent Owner's expert (Mr. Visser) and Petitioner's expert (Mr. Kemnitzer), we find that Merit discloses the claimed limitation. Although Merit does not provide a figure to depict the structure described at 6:44–50, as pointed out by Patent Owner (*see* PO Resp. 83), we credit Mr. Kemnitzer's testimony that Merit discloses a lock that extends upwardly from the base to allow a user to actuate a lock (*see, e.g.*, Ex. 1025 ¶ 143). Importantly, Merit discloses that a "ring or other type of pull (such as a 'T' member) is attached to extension 14a to allow *extension 14a to be pulled up to release base 3 from member 7*." Ex. 1004, 6:44–50 (emphasis added). We determine one of ordinary skill in the art would have understood from this disclosure that Merit's pull would extends upwardly from the base. Thus, by disclosing extension 14a that is "pulled up to release base 3 from member 7," Merit discloses a "front lock [that] defines a portion that extends upwardly from the divider floor," as recited in claim 10. Ex. 1001, 50:30–32.

We are persuaded by Petitioner's argument and evidence, and find that Petitioner has established by a preponderance of the evidence that Merit discloses the limitations of claim 10 for the reasons stated by Petitioner in the Petition, which we adopt as our own findings, as further supported by the testimony of Mr. Kemnitzer.

5. Claim 12

Claim 12 is an independent claim that is similar to claim 1 with the exception that claim 12 further recites, "wherein the front rail further defines a tongue extending upwardly from the rail, and wherein the divider floor defines a groove for receiving the tongue when the divider floor is mounted to the front rail." *Compare* Ex. 1001, 49:56–50:7, *with id.* at 50:56–51:11.

To address the claimed "tongue extending upwardly from the rail, and wherein the divider floor defines a groove for receiving the tongue," Petitioner asserts that Merit discloses this limitation. Pet. 43. In support of this assertion, Petitioner submits an annotated version of Merit's Figure 6B, which we reproduce, below:

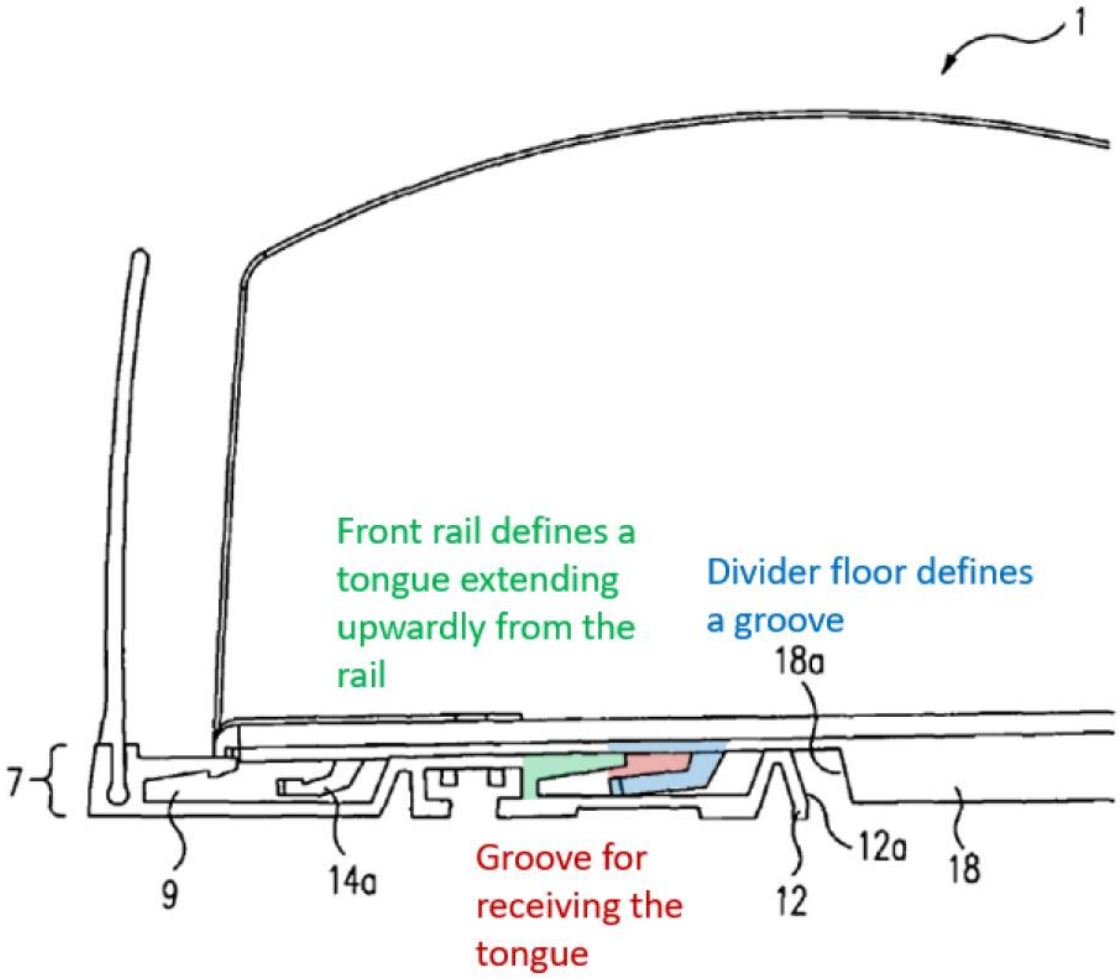


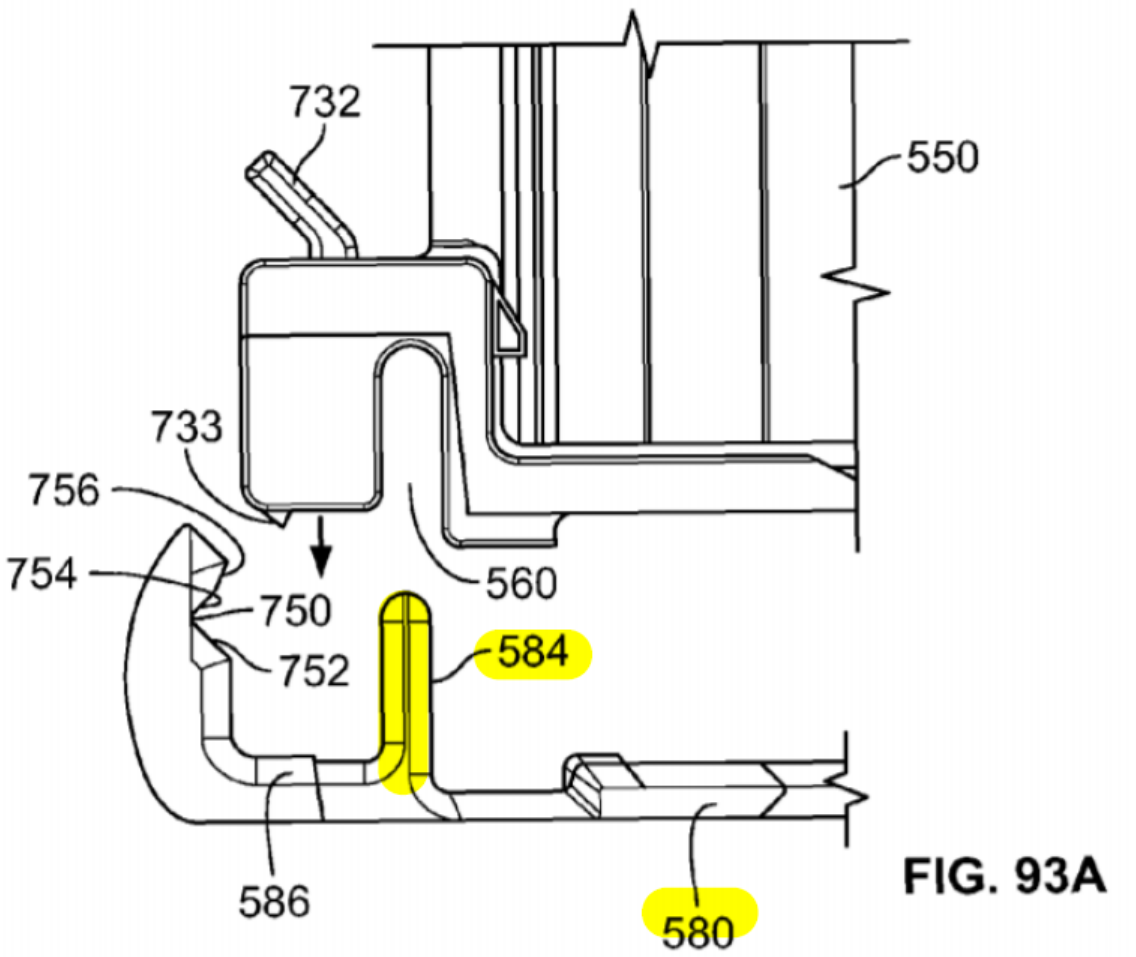
FIG. 6B

Figure 6B is an exploded view that illustrates "the method of disengaging and re-engaging a divider base member and mounting member of a shelf management system." Ex. 1004, 2:66–3:2. Petitioner's expert, Mr. Kemnitzer, testifies that the annotated figure shows the tongue (in green) and groove (in red) prior to when the divider floor is mounted to the front rail. Ex. 1002 ¶ 134.

Patent Owner, on the other hand, contends that Merit does not disclose a tongue that extends upwardly from the rail. PO Resp. 72. Patent Owner asserts that Merit's tongue, "at best," is substantially horizontal. *Id.*

We agree with Patent Owner that Merit does not disclose the claimed tongue. Petitioner's assertion that Merit discloses this structure is not supported by the record.

The plain and ordinary meaning of the limitation requires a tongue that extends upwardly, or vertically, from the rail. Ex. 1001, 51:8–9. At least Figure 93A of the Specification (reproduced below, and highlighted by Patent Owner (PO Resp. 77)) provides subject matter support for the claimed limitation:



Ex. 1001, Fig. 93A

Figure 93A depicts an exemplary divider mounting to a front rail. Ex. 1001, 11:62–63. The Specification describes that tongue 584 extends upwardly from front rail 550 and that the tongue is received in corresponding groove 560. *See* Ex. 1001, 26:38–49; *see also* Ex. 2006 ¶ 113 (testifying to the same).

Patent Owner submits an annotated version of Merit's Figure 4 to further illustrate how Merit's structure does not disclose an upwardly-extending tongue (PO Resp. 76), which we reproduce, below:

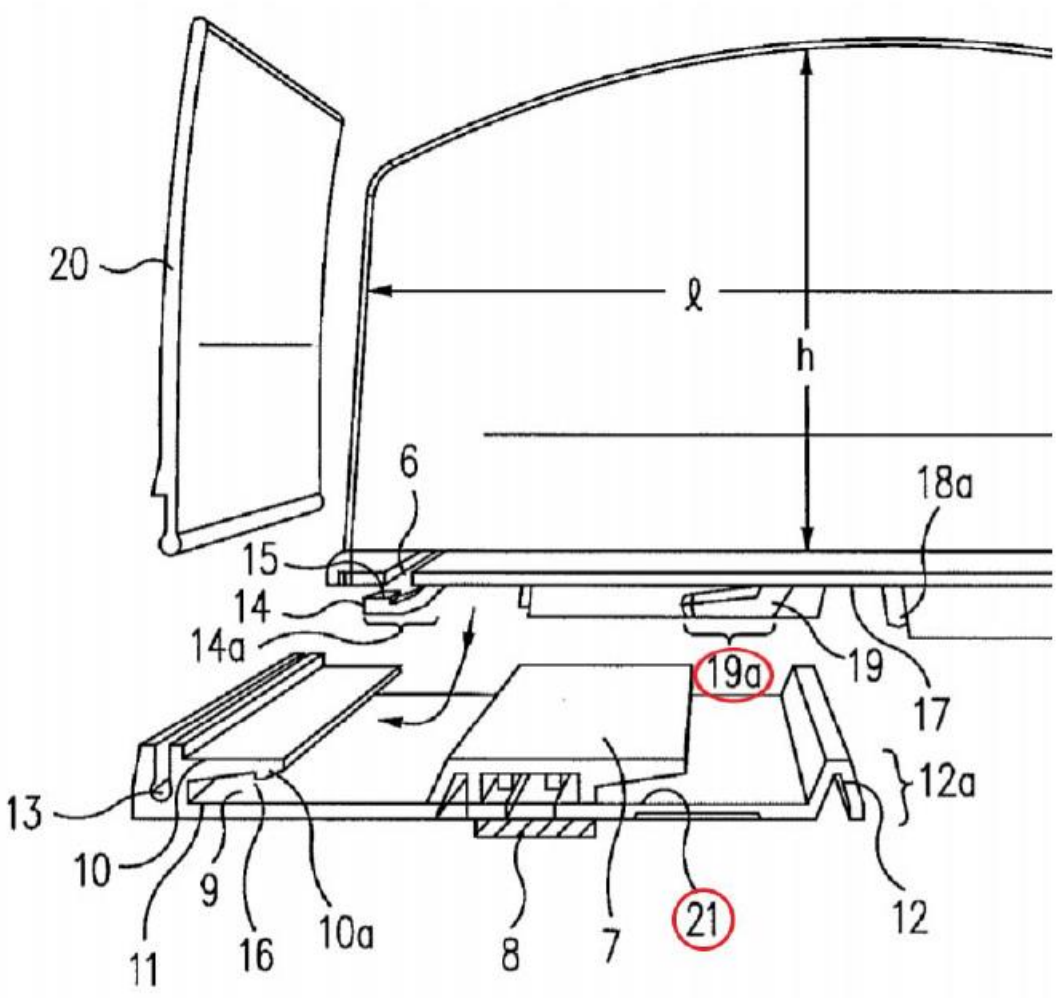


Figure 4 depicts an isometric view of Merit's "disengaged divider member and mounting member of a shelf management system." Ex. 1004, 2:52–54. Patent Owner asserts that Merit's "'base 3' may be unlocked from 'mounting member 7' by 'slid[ing] back' base 3 away from the front of the shelf." PO Resp. 76 (citing Ex. 1004, 4:38–42) (alteration in original); *see also supra* p. 40 (reproducing Petitioner's annotated version of Merit's Figure 1 that depicts "base" 3 in relation to "mounting member" 7). Patent Owner's expert, Mr. Visser, testifies that "[t]his 'slid[ing] back' of base 3 is done using 'predominantly horizontal motion.'" Ex. 2006 ¶ 112 (citing Ex. 1004, 6:7–11) (alteration in original).

Patent Owner further asserts that a skilled artisan would have understood Merit's "tongue" to only extend horizontally, and submits an annotated version of Merit's Figure 6B (PO Resp. 74), reproduced below, to illustrate this point:

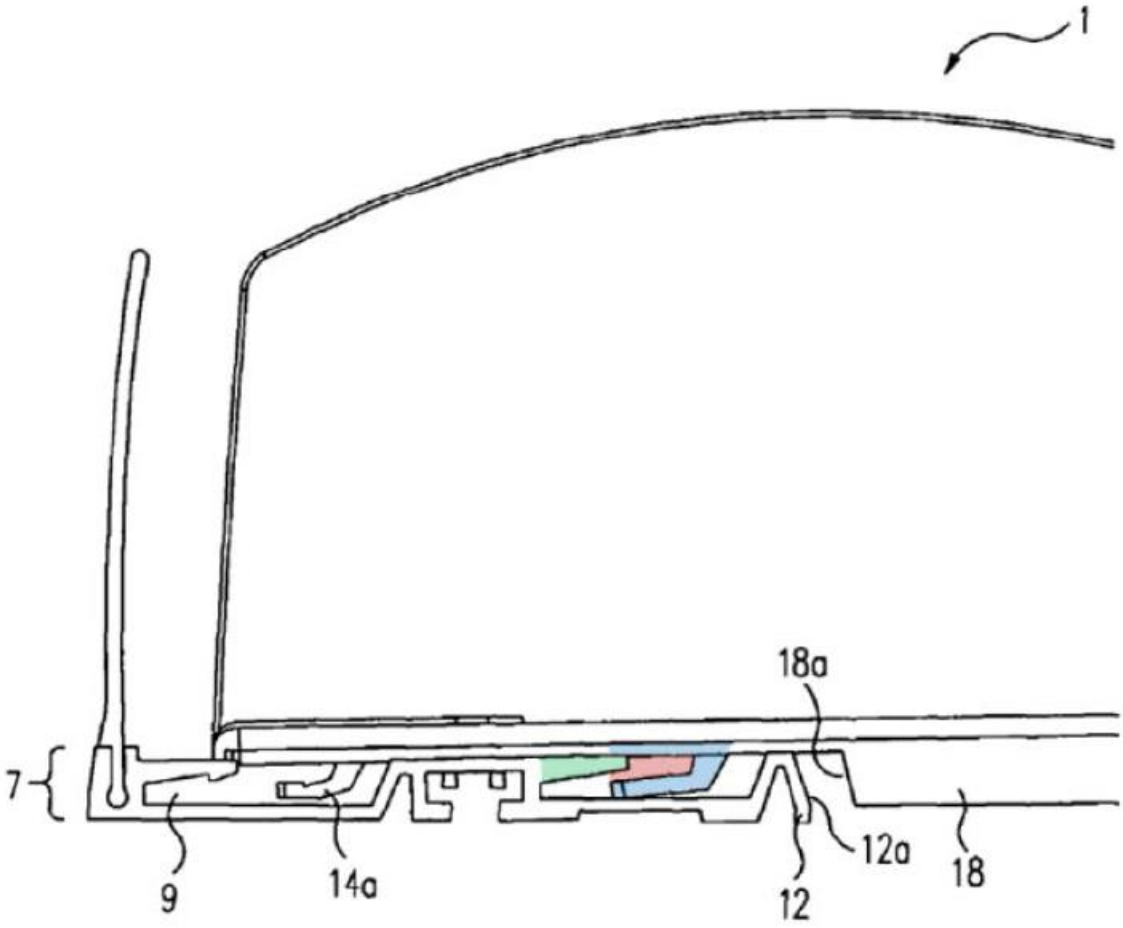


Figure 6B depicts Merit's method of disengaging and re-engaging a divider base. Ex. 1004, 2:66–3:2. Patent Owner's expert, Mr. Visser, testifies that a skilled artisan "would only consider the portion of the green-highlighted projection that is actually received by the corresponding groove to be a 'tongue' within the meaning of the Patent." Ex. 2006 ¶ 108.

Having weighed the competing testimony of Mr. Visser (Patent Owner's expert) and Mr. Kemnitzer (Petitioner's expert), and having

reviewed the relevant disclosure within Merit, we agree with Patent Owner, and credit Mr. Visser's testimony in support of Patent Owner's argument. We find that Merit's structure—which Petitioner relies on for satisfying the claimed "extending upwardly"—is simply a nominal height for allowing Merit's horizontal "tongue" to be received within Merit's horizontal "groove." Merit's "tongue" is three dimensional (*see, e.g.*, Ex. 1004, Fig. 4) and will have a height, width, and length, and we do not find the presence of a height to satisfy the claimed "extending upwardly." We find that the height, which Petitioner relies on for "extending upwardly" (*see* Pet. 43), is simply vertical spacing to allow Merit's horizontal "tongue" to fit within Merit's horizontal "groove." *See, e.g.*, Ex. 1004, Figs. 5B, 6B.

The claim not only recites a "tongue" that "extends upwardly from the rail," but also recites a "groove for receiving the tongue." Ex. 1001, 51:8–11. We agree with Patent Owner that Merit does not disclose an upwardly extending tongue that is received in a groove. As shown in Merit's Figures, Merit's "tongue" is horizontal and is received in a horizontal groove. Although this tongue has a nominal height so that it can fit within the groove, we find that it is substantially horizontal and does not extend upwardly. Petitioner has failed to persuade us that Merit's horizontal tongue and horizontal groove satisfy the claimed structure.

We find that Petitioner has not established by a preponderance of the evidence that Merit discloses the limitations of claim 12 for the reasons argued by Patent Owner, and as further supported by the declarations of Mr. Visser.

6. Summary of Ground 1

Based on the foregoing, we determine Petitioner has proven by a preponderance of the evidence that claims 1, 2, and 10 are anticipated by Merit. Petitioner has not shown that claim 12 is anticipated by Merit.

E. Ground 3 – Claim 8 as Unpatentable Over Merit and Howerton

Petitioner submits that claim 8 is unpatentable over Merit in view of Howerton. Pet. 52.

1. Howerton (Ex. 1006)

Howerton is a U.S. Patent Application titled "Pusher-Type Display System." Ex. 1006, code (54). Howerton discloses a display device having a spring-based pusher carried on an elongated track. *Id.* at code (57). To depict an embodiment of Howerton's display device, we reproduce its Figure 2, below:

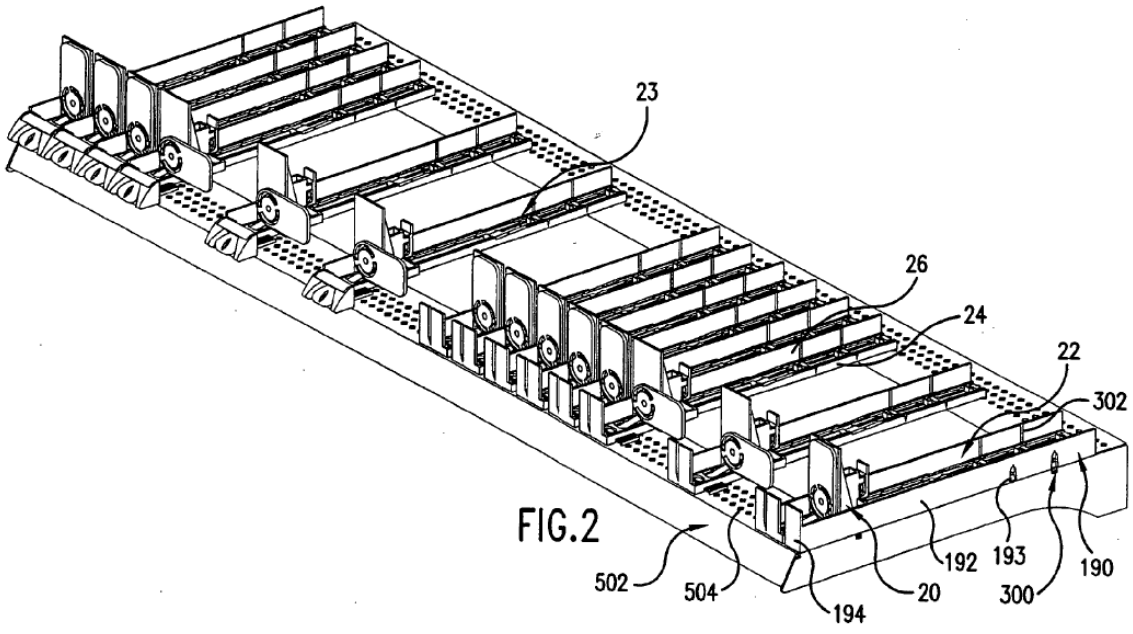


Figure 2 depicts a product-holding display system. *Id.* ¶¶ 15, 16. In particular, Figure 1 depicts an empty display system for displaying and dispensing products. *Id.* ¶ 39. Products are driven forward by pusher element 20. *Id.*

Howerton further discloses that, in an exemplary embodiment, "[t]he faceplate and body have interengaged features permitting the faceplate to be rotated about a longitudinal axis . . . , in which the faceplate presents a relatively narrow contract surface and a second orientation . . . wherein the faceplate presents a relatively wide contact surface." Ex. 1006 ¶ 43.

2. Analysis

Claim 8 depends from claim 1 and further recites, "wherein the pusher mechanism further includes a pusher extender that can rotate to one or more positions." Ex. 1001, 50:24–26.

To satisfy the claim, Petitioner relies on Howerton. *See* Pet. 52–53. In particular, Petitioner relies on Howerton's disclosure of a "faceplate and body hav[ing] interengaged features permitting the faceplate to be rotated about a longitudinal axis 512 at least between a first orientation" in which "the faceplate presents a relatively narrow contact surface and a second orientation . . . wherein the faceplate presents a relatively wide contact surface." *Id.* at 52–53 (quoting Ex. 1006 ¶ 43) (emphases omitted, ellipses in original).

In combining Merit with Howerton, Petitioner reasons that

> A POSITA would have been motivated to apply the teachings of Howerton to Merit [to] provide the ability to adjust the pusher contact span for wide and narrow products . . . . Incorporating Howerton's faceplate on the system of Merit

> would have required no modification to the system of Merit other than to mount a faceplate onto paddle 5 of Merit.

Pet. 53–54 (citing Ex. 1002 ¶ 158).

Patent Owner generally argues that Petitioner's obviousness ground is tainted by impermissible hindsight. *See* PO Resp. 91–93. Patent Owner argues that a skilled artisan "would not have been motivated to add Howerton's faceplate to Merit's pusher 5 in order to accommodate wider products." *Id.* at 93 n.11.

Patent Owner's argument is not persuasive. We agree with Petitioner that the proposed modification would have improved Merit's device by allowing it to accommodate products with a more diverse range of sizes. *See* Pet. 52–54. Petitioner submits the following annotated figure to illustrate the combined structure (*id.* at 54):

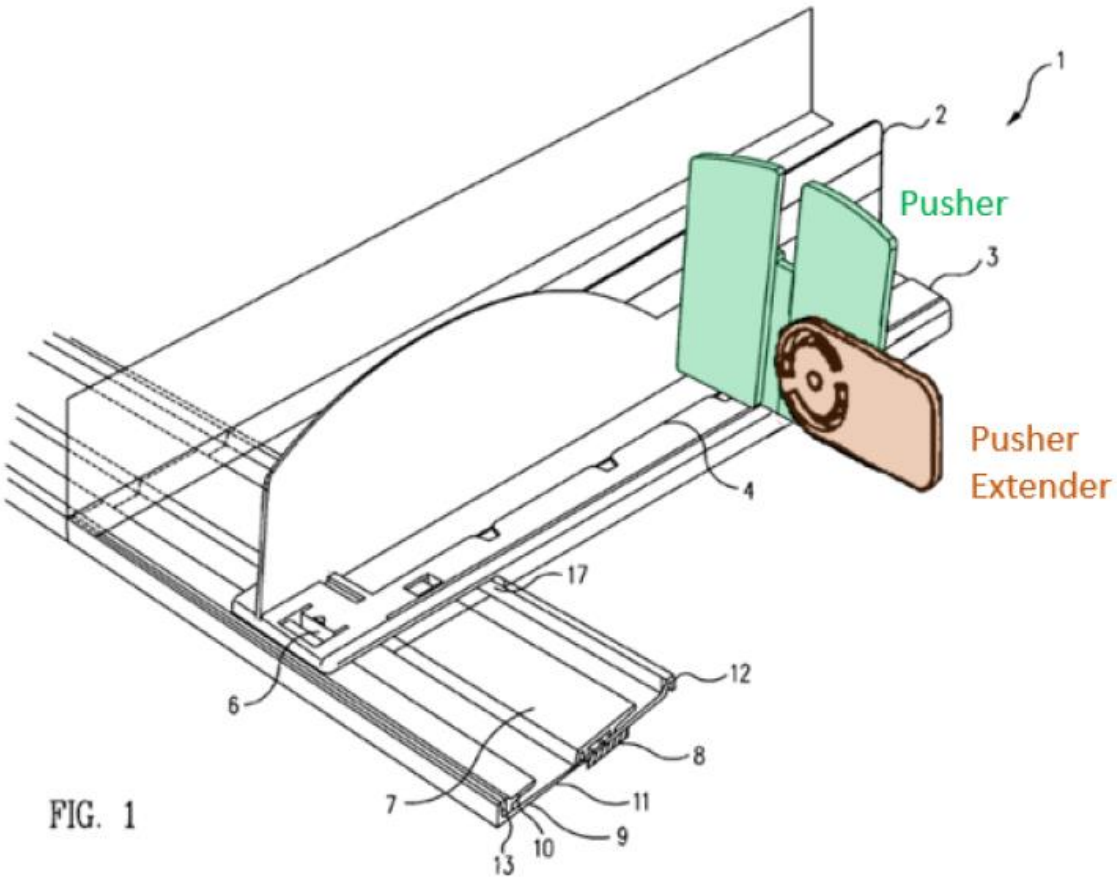


FIG. 1

The above figure depicts Petitioner's proposed modification to Merit, in which Howerton's rotatable "pusher extender" (peach color) is attached to Merit's "pusher" (green color). *See id.*

We agree with Petitioner and credit the testimony of Mr. Kemnitzer that the proposed modification would have improved Merit's device by accommodating products of varying widths. *See* Ex. 1002 ¶ 159. Patent Owner's argument to the contrary is not persuasive.

We are persuaded by Petitioner's argument and evidence, and find that Petitioner has established by a preponderance of the evidence that Merit, as modified by the teachings of Howerton, satisfies the limitations of claim 8 for the reasons stated by Petitioner in the Petition, which we adopt as our own findings, and as further supported by the testimony of Mr. Kemnitzer.

Based on the foregoing, we determine Petitioner has proven by a preponderance of the evidence that claim 8 is unpatentable over Merit and Howerton.

F. Ground 5 – Claim 11 as Unpatentable Over Merit and Rataiczak

Petitioner submits that claim 11 is unpatentable as obvious over Merit in view of Rataiczak. Pet. 57.

1. Rataiczak (Ex. 1008)

Rataiczak is a U.S. Patent Application titled "Merchandising System." Ex. 1008, code (54). To illustrate Rataiczak's merchandising system, we reproduce its Figure 1, below:

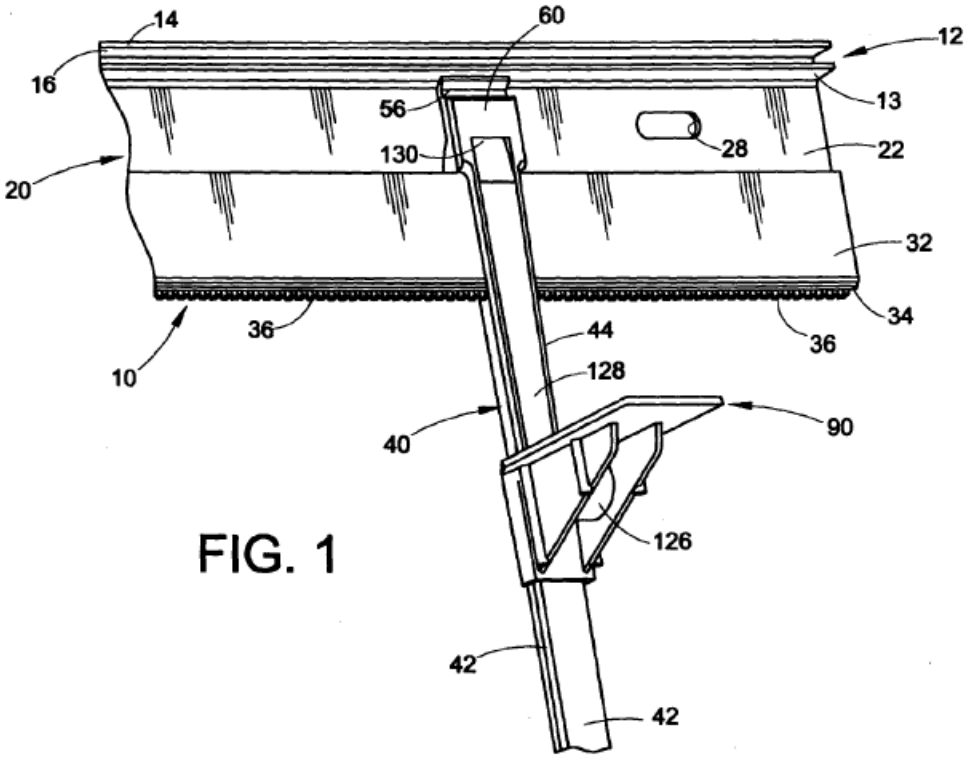


FIG. 1

Figure 1 is a perspective view of a merchandising system including a track mounted on a front rail. *Id.* ¶ 17.

Rataiczak discloses an embodiment in which its tracks and dividers are secured to its front rail through "teeth," or "engaging elements which selectively contact a suitably shaped engagement surface on the front rail." *See id.* ¶¶ 88, 90, 91.

2. Petitioner's Challenge

Claim 11 is an independent claim that is similar to claim 1, with the exception that claim 11 further recites, "wherein the front rail further defines a plurality of teeth, and wherein the front lock can engage the plurality of teeth to prevent slidable movement of the divider floor relative to the front rail." *Compare* Ex. 1001, 49:56–50:7, *with id.* at 50:33–55.

To address this limitation, Petitioner proposes to modify Merit's display system, as discussed above in connection with Ground 1, claim 1, to include the teaching of Rataiczak. *See* Pet. 57. In particular, Petitioner relies on Rataiczak's disclosure that "front rail 490 accommodates one or more tracks 492 and one or more dividers" and that "teeth 502 are provided on the front rail . . . [to] selectively engage . . . teeth 504 provided on a moveable engaging member 506." *Id.* (quoting Ex. 1008 ¶¶ 88, 91; citing *id.* at Figs. 25–28). We reproduce Figure 27 of Rataiczak, below:

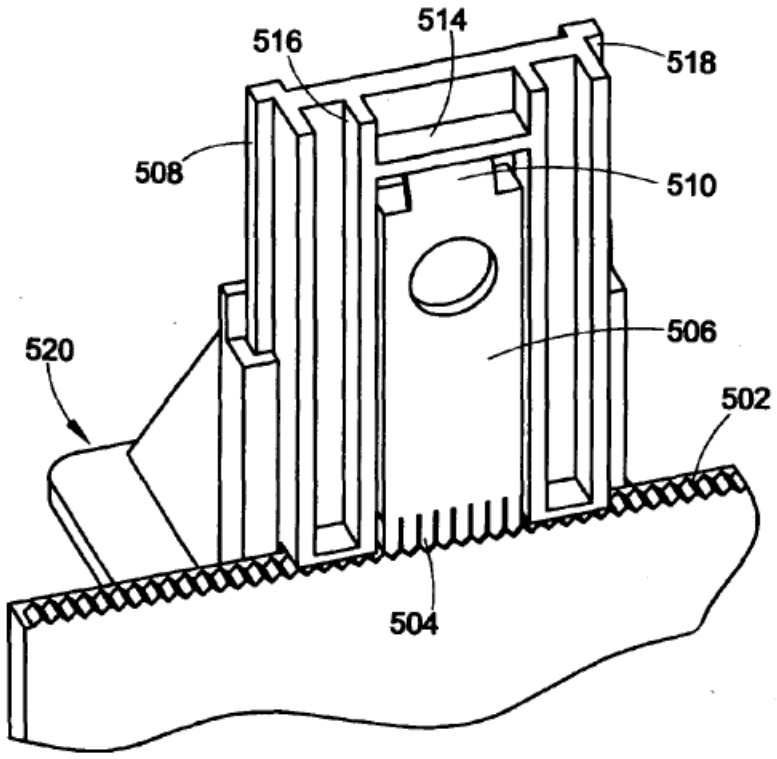


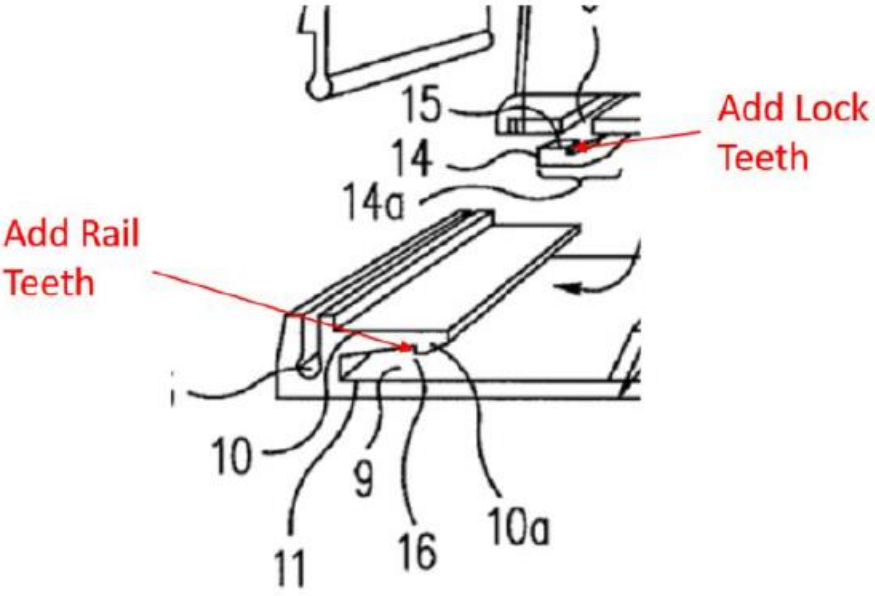
FIG. 27

Figure 27 depicts an enlarged perspective view of Rataiczak's track and front rail, including teeth 502 on the front rail for engaging teeth 504 of engaging member 506. *See* Ex. 1008 ¶¶ 45, 90.

In combining Merit with Rataiczak's teachings, Petitioner reasons that

> A POSITA would understand that engagement of teeth (Rataiczak) rather than flat surfaces (Merit) increases the amount of force required to displace the engaging elements. A POSITA would recognize that the Rataiczak solution offers a more secure engagement with the front rail, which offers potential benefits such as a stronger lock between the divider and the front rail, and would be motivated to incorporate the teachings of Rataiczak when reviewing the Merit reference, for example as shown below.

Pet. 58 (citation omitted) (citing Ex. 1002 ¶¶ 177–179). Petitioner submits the following illustration to depict the proposed combination (*id.* at 59):



The above figure depicts the location where, according to Petitioner, a skilled artisan would have added teeth to Merit's front rail and divider. *See id.*

3. Patent Owner's Arguments

Patent Owner responds that a skilled artisan would not have added Rataiczak's teeth to Merit's display system. *See* PO Resp. 39; *see also id.* at 91 (arguing that Petitioner is relying on impermissible hindsight). In support of this argument, Patent Owner presents the following sub-arguments:

(1) Petitioner's expert "disavowed" Petitioner's theory of obviousness (PO Resp. 40–46);

(2) Petitioner's "new obviousness theory fails" because Merit's system meets its stated goals without further modification (*id.* at 46–50);

(3) Adding teeth to Merit's system would "create significant drawbacks" (*id.* at 50–52); and

(4) A skilled artisan would not add teeth to the suggested location (*id.* at 53–57).

We address each of Patent Owner's arguments separately, below.

4. Analysis

a) Petitioner's expert did not "disavow" Petitioner's theory of obviousness

Patent Owner first argues Petitioner's expert, Mr. Kemnitzer, "testified that Merit's mounting member 7 cannot be injection molded but must instead be fabricated through a process called extrusion" (PO Resp. 41 (citing Ex. 2007, 186:22–187:8)) and that extrusion "would not allow for the addition of teeth to the 'backside of [Merit's] protrusions 15 and 10a" (*id.* at 42) (emphasis omitted).

Patent Owner's argument is not persuasive. Patent Owner mischaracterizes Mr. Kemnitzer's testimony as being a "disavowal" of Petitioner's theory of obviousness. *See* PO Resp. 40. We do not find Mr. Kemnitzer's cross-examination testimony (Ex. 2007, 186:22–187:8) as to the extrusion of Merit's rail as upending Petitioner's obviousness theory, as Patent Owner contends. *See* PO Resp. 41–46. Rather, we agree with and credit Mr. Kemnitzer's testimony that a skilled artisan would have recognized *numerous ways* (not just extrusion) to manufacture a device incorporating the concept of "teeth" from Rataiczak onto Merit. Ex. 1025 ¶¶ 83, 84.

b) Petitioner's obviousness theory does not "fail" and Petitioner's proposed modification improves Merit's system

Patent Owner also argues that Merit's system "is perfectly adequate for its intended purpose" and incorporating teeth would "present significant drawbacks," including adding "significant cost and complexity to the

system." *See* PO Resp. 46. Patent Owner further asserts that Merit's "interference fit is perfectly adequate for the retail setting" (*id.* at 47) and that Merit's interference fit "allows for 'convenient[']repositioning [of] the divider[s]," thereby teaching against the use of teeth (*id.* at 48) (alterations in original). Patent Owner also asserts that "there would be no reason to incorporate teeth into Merit's system to prevent fishtailing," as "Merit's system already accomplishes this goal." *Id.* at 49 (citing Ex. 2006 ¶ 165).

Patent Owner's argument is not persuasive. Even if we assume that Merit's system is already adequate for its intended purpose, we find that the proposed modification would nevertheless improve Merit's system. More particularly, even if we assume that Merit's system already allows for convenient repositioning of the dividers and prevents fishtailing (*see* PO Resp. 47–49), we find that the modification improves Merit's design by providing dividers that are less likely to move out of position. We agree with and credit Mr. Kemnitzer that

> [T]he improvement provided by teeth is significant. Teeth would increase the contact surface area between the front rail and the lock of Merit, and proportionately increase the frictional force between these two components. This is true for teeth running parallel to the length of the rail and teeth running perpendicular to the length of the rail. Teeth running perpendicular to the length of the rail configuration further increase the amount of force required to displace the engaging elements, by virtue of the mechanical interaction of the teeth. A POSITA would understand that additional security of the engagement would provide benefits. For example, the more secure engagement would be helpful for cylindrical-shaped products being pushed forward by the pusher because these products tend to slide past one another, creating lateral pressure on the dividers and moving them sideways. Rataiczak teaches that a lock with teeth is effective to prevent any tendency for "dividers to 'walk' in relation to the

> mounting member when cylindrical items, such as cans or bottles, are pushed forward on a track."

Ex. 1025 ¶ 72 (citing in part Ex. 1008 ¶ 9, quoting *id.* at ¶ 98).

c) Adding teeth to Merit's system would not "create significant drawbacks"

Patent Owner also argues that the proposed modification "would necessarily allow some degree of divider fishtailing" and that it would "present[] manufacturing challenges that would increase the cost of Merit's system." PO Resp. 50. In particular, Patent Owner contends that a skilled artisan would not be motivated to add teeth to Merit as proposed, because doing so would introduce "tolerance, or play, into the system," resulting in fishtailing and rendering Merit inoperable for its intended purpose. *Id.* at 51. Patent Owner also contends that "adding teeth would require additional manufacturing processes that would be costly to implement," further deterring a skilled artisan from making the modification. *Id.* at 52.

Patent Owner's arguments are not persuasive.

As to fishtailing, we are not persuaded that the proposed modification would introduce fishtailing. We credit Mr. Kemnitzer's testimony that "teeth do not necessarily create extra space or 'play' beyond what is already required for the lock of Merit to operate." Ex. 1025 ¶ 80. "A person of ordinary skill is also a person of ordinary creativity, not an automaton" (*KSR*, 550 U.S. at 421), and we find that a skilled artisan would have been able to incorporate teeth into Merit's front rail and divider without introducing undesirable fishtailing.

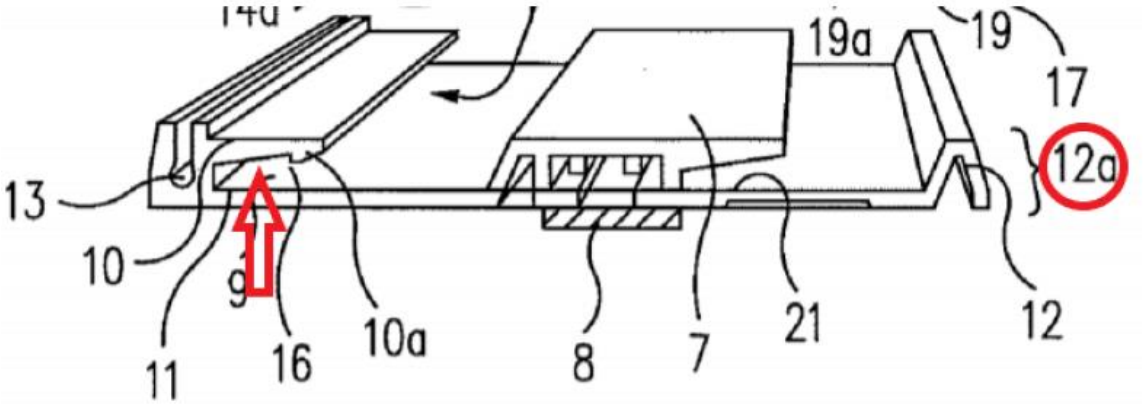
We disagree with Patent Owner's argument that a skilled artisan would have been dissuaded from making the modification due to added cost

and complexity. *See* PO Resp. 52. *Even if* we assume Patent Owner's argument that the modification would have added cost and complexity to Merit's system (*see id.*), a skilled artisan would have weighed the benefit gained—a more secure connection—against the added cost of manufacture and would have nevertheless made the modification. *See Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another."). Having reviewed the competing testimony of Petitioner's expert (Mr. Kemnitzer) and Patent Owner's expert (Mr. Visser), we find more persuasive Mr. Kemnitzer's testimony that the modification would add minimal costs to the tooling and parts, if any. *See* Ex. 1025 ¶¶ 85–89. We further find that the downside of the added cost is outweighed by the benefit of providing a more secure engagement. *See id.* ¶ 72 ("A POSITA would understand that additional security of the engagement would provide benefits. For example, the more secure engagement would be helpful for cylindrical-shaped products being pushed forward by the pusher because these products tend to slide past one another, creating lateral pressure on the dividers and moving them sideways.").

d) A skilled artisan would have added teeth at the suggested location

Patent Owner further argues that a skilled artisan, in combining the Rataiczak's teachings of teeth with Merit, would not add teeth to Merit's front rail as Petitioner proposes. *See* PO Resp. 53–57. Patent Owner

submits that a skilled artisan, desiring to add teeth to Merit in order to provide a more secure engagement between Merit's rail and divider, would have instead located teeth on Merit's surface 12a. *See id.* To illustrate this point, Patent Owner submits an annotated version of a partial view of Merit's Figure 4 (*id.* at 55), which we reproduce, below:



Ex. 1004, Fig. 4 (annotated portion)

Figure 4 depicts Merit's disengaged divider member and mounting member of its shelf management system. Ex. 1004, 2:51–53. Patent Owner contends that "it would be simpler and less expensive to implement a manufacturing process that added teeth to surface 12a," rather than on the underside of 10—which is what Petitioner's expert proposes. PO Resp. 55 (citing Ex. 2006 ¶ 187).

Patent Owner's argument is not persuasive. Rather, we find persuasive Petitioner's explanation that "because the front of [Merit's] system receives the most lateral forces (e.g., bumping/contact) during use" (Pet. Reply 25 (citing in part Ex. 1025 ¶ 92)), a skilled artisan would have located Merit's teeth to Merit's front rail and front lock as reasoned by Petitioner (*see* Pet. 57–58).

5. Summary of Ground 5

We are persuaded by Petitioner's argument and evidence, and find that Petitioner has established by a preponderance of the evidence that Merit in view of Rataiczak satisfies the limitations of claim 11 for the reasons stated by Petitioner in the Petition, which we adopt as our own findings, as further supported by the testimony of Mr. Kemnitzer.

Petitioner has proven by a preponderance of the evidence that claim 11 is unpatentable over Merit in view of Rataiczak.

G. Ground 7 – Claims 13, 14, and 18 as Unpatentable Over Merit and Bernardin

Petitioner contends that claims 13, 14, and 18 are unpatentable over Merit in view of Bernardin. Pet. 65.

1. Bernardin (Ex. 1007)

Bernardin is a U.S. Patent titled "Display Tray for Aligned Particles." Ex. 1007, code (54). Below, we reproduce Figure 1 to depict an embodiment of Bernardin's display tray:

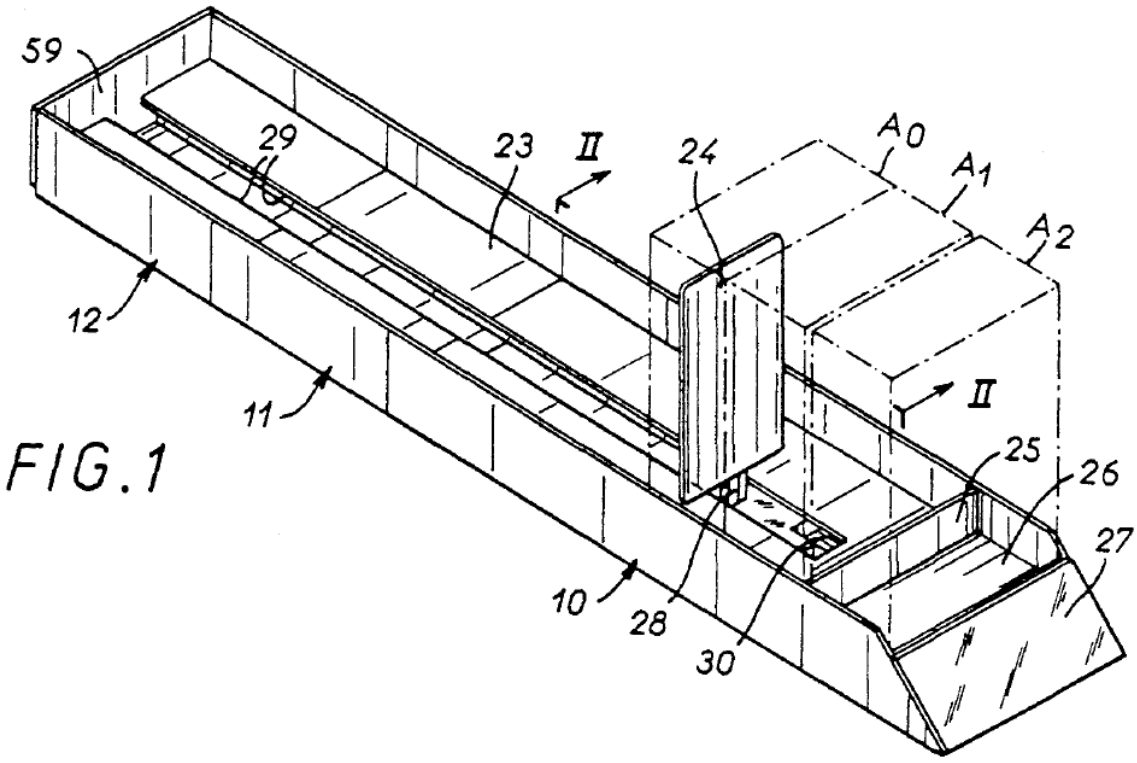


FIG. 1

Figure 1 is a perspective view of Bernardin's "merchandiser." *Id.* at 2:66. More particularly, Figure 1 depicts "a merchandiser in accordance with the invention" with a casing comprising "base module 10 and a variable number of extension modules 11, 12, etc. The length of each extension module represents a fraction (one third, for example) of the base module." *Id.* at 3:38–43 (emphasis omitted). Two sidewalls (numbered as 21, 22 in Figure 6) are provided above bottom 23 for articles A0, A1, A2, etc. *Id.* at 3:44–48. The articles are pushed by clamp/pusher member 24 against anterior wall 25. *Id.* at 3:50–52.

2. Claim 13

Claim 13 is independent and is similar to claim 1 with the exception that claim 13 further recites numerous other limitations, namely, "a divider wall extending upwardly from the divider floor," "a front barrier mounted to

a front end of the divider, the front barrier defining a plane extending perpendicularly to both the divider floor and the divider wall," and "wherein the front lock is positioned in front of the barrier and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor and without having to push back product located on the divider floor." *Compare* Ex. 1001, 49:56–50:7, *with id.* at 51:12–34.

a) Petitioner's Challenge

In challenging claim 13, Petitioner relies on Merit for satisfying the same limitations recited in independent claim 1, and as set forth in Ground 1. *See* Pet. 65–66.

The parties acknowledge, however, that Merit does not disclose a "front barrier mounted to a *front end of the divider*." *See* Pet. 65–66 (emphasis added); PO Resp. 58.

Instead, Petitioner submits that Merit discloses a "front barrier," or "baffle plate 20," *mounted to the front rail*. Ex. 1004, 4:56–64, Figs. 2, 4, 6A, 6B. To illustrate Merit's "front barrier" mounted to its front rail, we reproduce Merit's Figure 4, below:

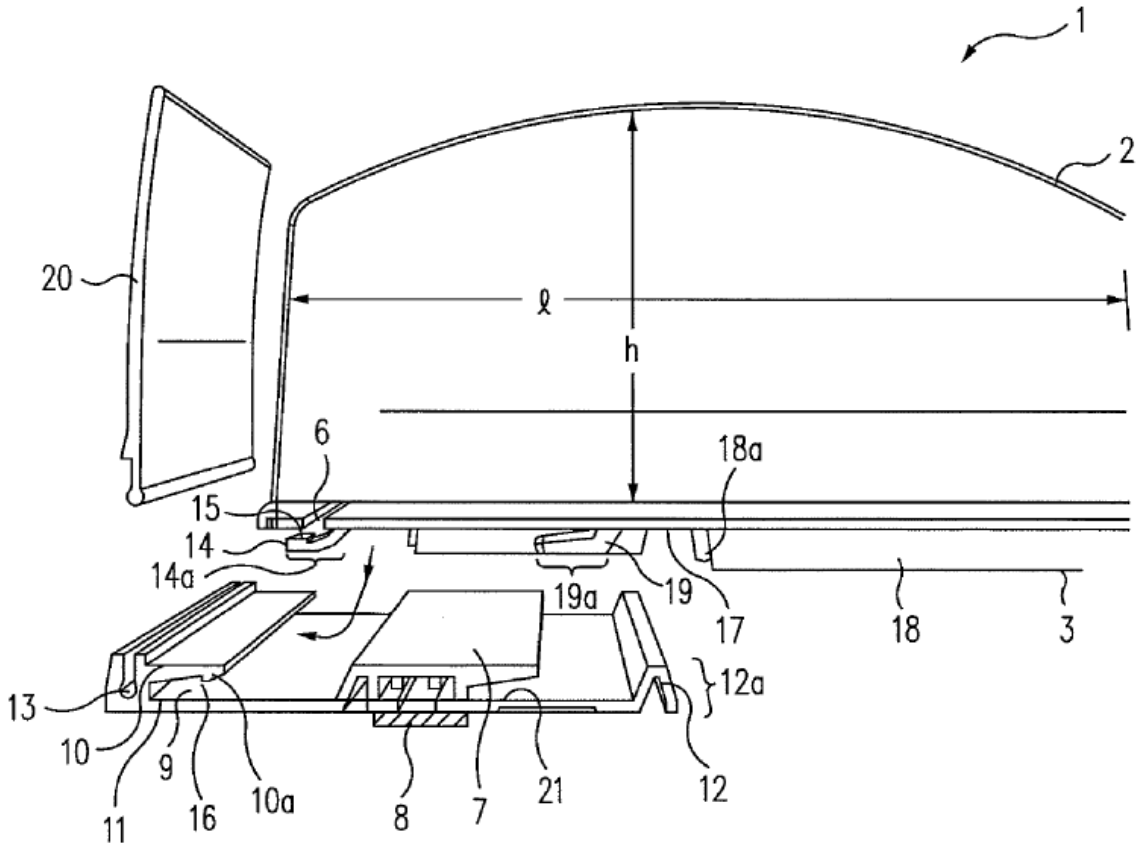


FIG. 4

Figure 4 depicts a disengaged divider member and mounting member of Merit's shelf management system. *Id.* at 2:51–53. In particular, Figure 4 depicts slot 13 in mounting member 7 for holding baffle plate 20, which prevents articles from being pushed off the shelf by spring 4 acting on pusher plate 5 (shown in Figure 2). *Id.* at 4:56–58.

To address the claimed "front barrier mounted to a front end of the divider," Petitioner relies on Bernardin's teachings and proposes to modify Merit. *See* Pet. 66. In particular, Petitioner asserts that "Bernardin discloses a barrier, referred to as an anterior abutment wall 25A, *located on a front end of a divider*." *Id.* (citing Ex. 1002 ¶ 213) (emphasis added). To

illustrate this finding, Petitioner submits an annotated version of Bernardin's Figure 16 (*id.* at 69), which we reproduce, below:

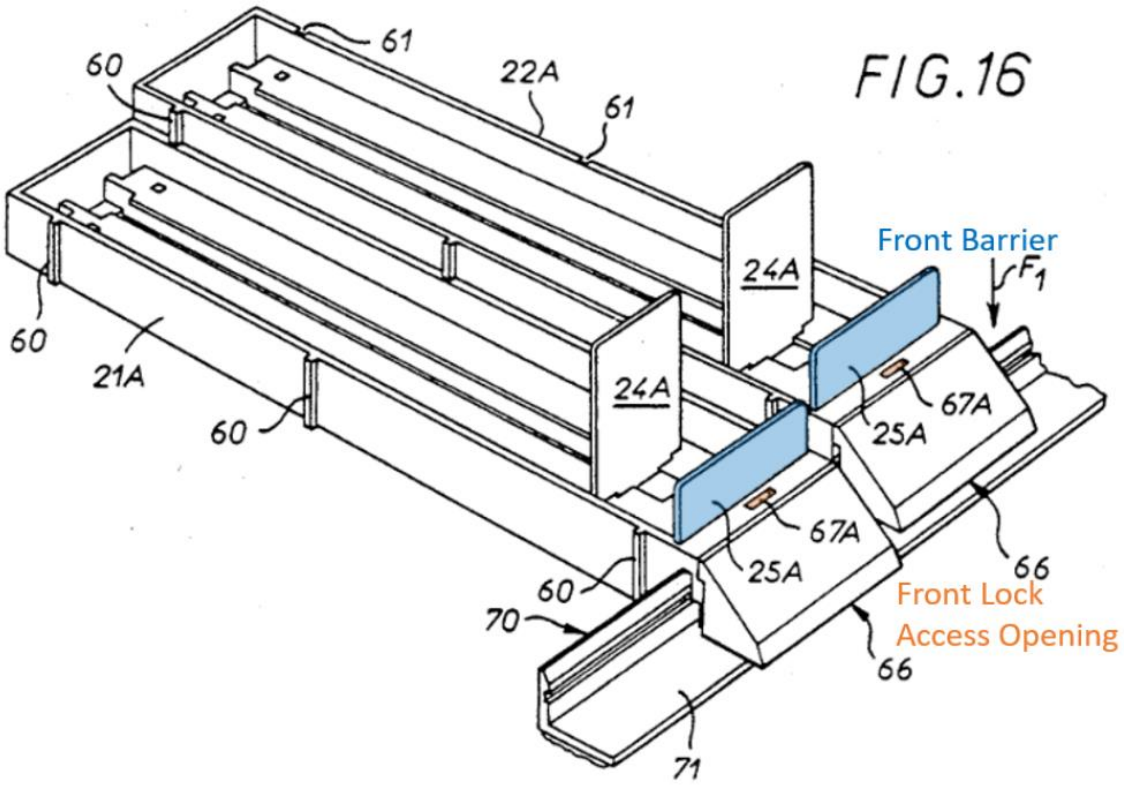


Figure 16 is a perspective view of two merchandisers of the merchandiser shown in Figure 10. *See* Ex. 1007, 2:66–68, 3:11–12, 3:30–33. Petitioner submits that the annotated figure illustrates a "front barrier," abutment wall 25A (shown in blue), located on a front end of a divider wall. *See* Pet. 66. Petitioner submits that this figure further depicts a "front lock access opening" (shown in peach color) as being in front of the "front barrier." *See id.* at 68–69.

Petitioner further explains that Merit's modified display system would result in a "front lock . . . [that] is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor and without having to push back product located on the divider floor," as also required by claim 13. *See* Pet. 76.

In modifying Merit based on Bernardin's teachings, Petitioner provides the following reasons:

> (1) "A POSITA would have been motivated to apply the teachings of Bernardin to Merit [to] prevent accidental tilting of tall products at the front of the pusher rack" (Pet. 66);
>
> (2) "Combining the teachings of Merit and Bernardin would have been obvious to try and would have been a simple substitution of one known element for another to obtain the same predictable result, namely, preventing products from falling off the shelf" (*id.* at 67);
>
> (3) A "POSITA would have found it obvious to implement the barrier configuration of Bernardin on the system of Merit for the benefit of permitting access to the front lock of Merit regardless of the location of product on the divider floor, thereby saving time and improving safety for store personnel" (*id.*); and
>
> (4) "A POSITA would be motivated to apply the teachings of Bernardin to Merit because by placing the barrier onto the divider, the two components could be formed in one piece, thereby reducing the number of system components and also reducing material usage by not requiring a barrier across the entire length of the front rail" (*id.* at 69).

b) Patent Owner's Argument

Patent Owner argues that Petitioner's proposed modification of Merit is based on impermissible hindsight. PO Resp. 92 (citing Pet. 66). Patent Owner contends that it is the '007 Patent that teaches this structure and "[i]t is improper for Petitioner to use that teaching of the '007 Patent to guide its obviousness analysis." *Id.*

Patent Owner also presents numerous other arguments challenging Petitioner's combinability of Merit and Bernardin (*see id.* at 67–72), which we also consider in our analysis.

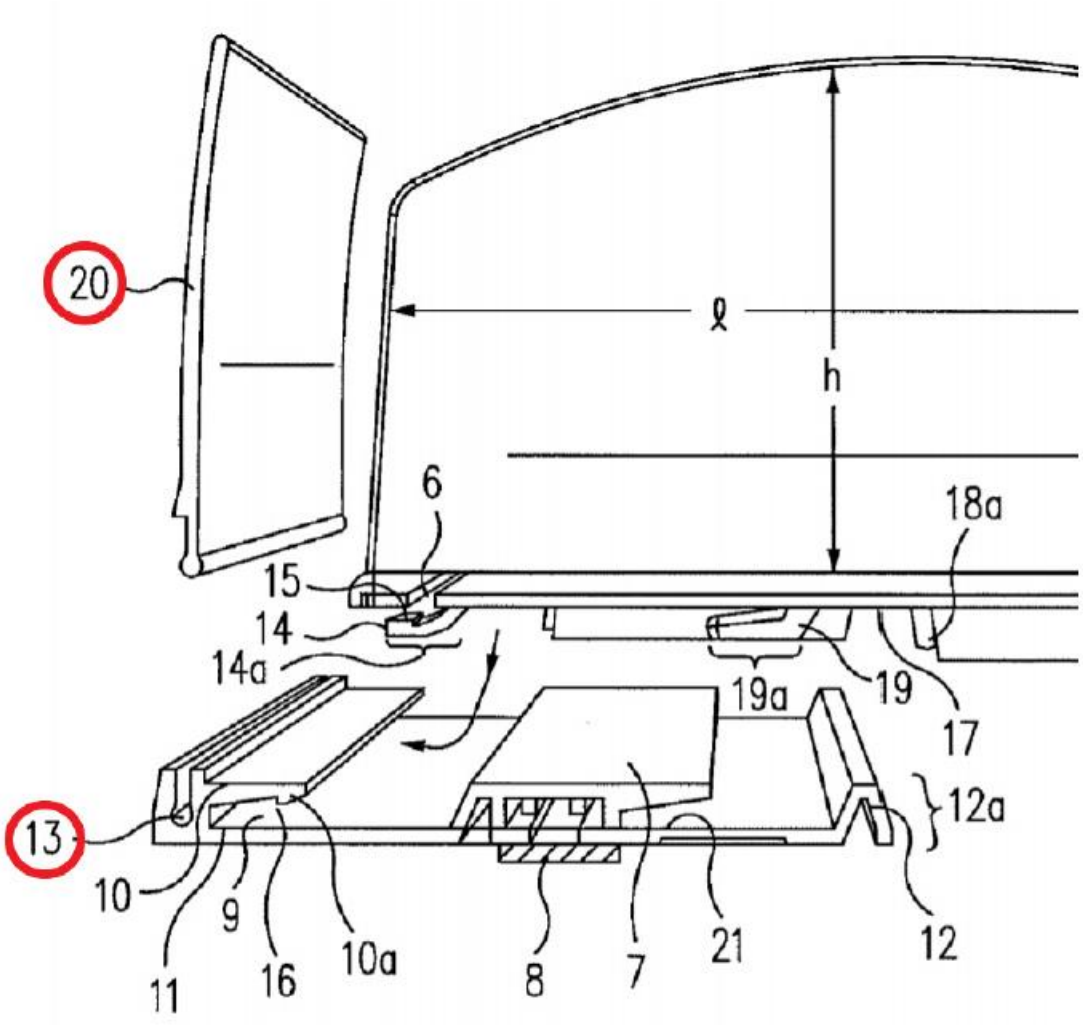
We find Patent Owner's argument persuasive.

c) Analysis

Petitioner's reasoning for modifying Merit (Pet. 66–69) is based on impermissible hindsight.

Petitioner's first reason for modifying Merit is to "prevent accidental tilting of tall products at the front of the pusher rack." Pet. 66. Petitioner's expert (Mr. Kemnitzer) testifies that a "POSITA would have been motivated to apply the teachings of Bernardin to Merit as an alternative means of preventing accidental tilting of tall products at the front of the Merit pusher track." Ex. 1002 ¶ 213. Petitioner submits that the modification would be "obvious to try" and a "simple substitution." Pet. 67.

Merit discloses a "barrier wall" for preventing the accidental tilting of tall products. Indeed, Petitioner acknowledges as much. *See* Pet. 66 ("Merit discloses a front barrier, *i.e.*, 'the baffle plate 20.'"). Patent Owner submits an annotated version of Merit's Figure 4 (PO Resp. 60) to illustrate Merit's "barrier wall," which we reproduce, below:



Ex. 1004, Fig. 4 (annotated excerpt)

Figure 4 depicts a disengaged divider member and mounting member of Merit's shelf management system. Ex. 1004, 2:51–53. Patent Owner explains that baffle plate 20 prevents articles supported on Merit's divider base 3 from being pushed off the front of the shelf. PO Resp. 60. Merit discloses that "[s]lot 13 in mounting member 7 holds a baffle plate 20 which prevents articles from being pushed off the shelf by spring 4 acting on pusher plate 5." Ex. 1004, 4:56–58. Merit further discloses that "[b]affle plate 20 can be any appropriate size but preferably allows a shopper to see a substantial part of the article behind the plate." *Id.* at 4:62–64.

Because Merit already discloses a "front barrier" that is adjustable in size to prevent tall articles from falling off of the front of the shelf, we are not persuaded that a skilled artisan would have modified Merit to include barriers mounted to its dividers for the purpose of "prevent[ing] accidental tilting of tall products at the front of the pusher rack." Pet. 66. We do not find that the proposed modification would have improved Merit's ability to prevent products from falling off of the front of the shelf in any way.

Petitioner also reasons that relocating Merit's baffle plate 20 from its front rail to its divider "would have been a *simple substitution* of one known element for another to obtain the same predictable result, namely, preventing products from falling off the shelf." Pet. 67 (emphasis added).

We disagree.

We do not find the proposed modification to be a simple substitution. Rather, we find the proposed modification to be complex, involving a complete redesign of Merit's dividers. We also find that the modified design would not function as effectively for restraining products of varying widths *without removal of its dividers*, as Merit's original design boasts. *See, e.g.*, Ex. 1002, 2:12–17 ("This invention allows . . . the widths of the articles to be displayed to be adjusted without having to physically remove the divider structures from the shelves").

To illustrate our point, we start with Merit's current "barrier wall" (baffle plate 20) by reproducing Merit's Figure 4, below:

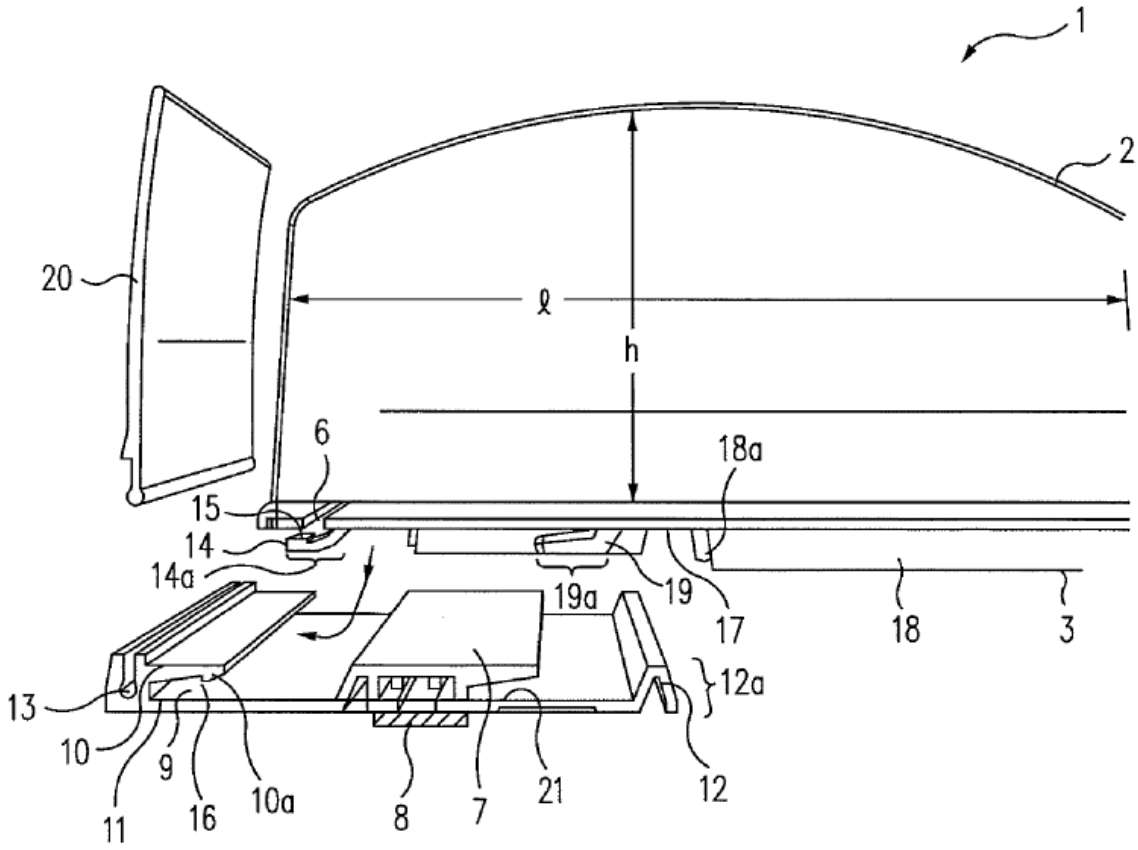
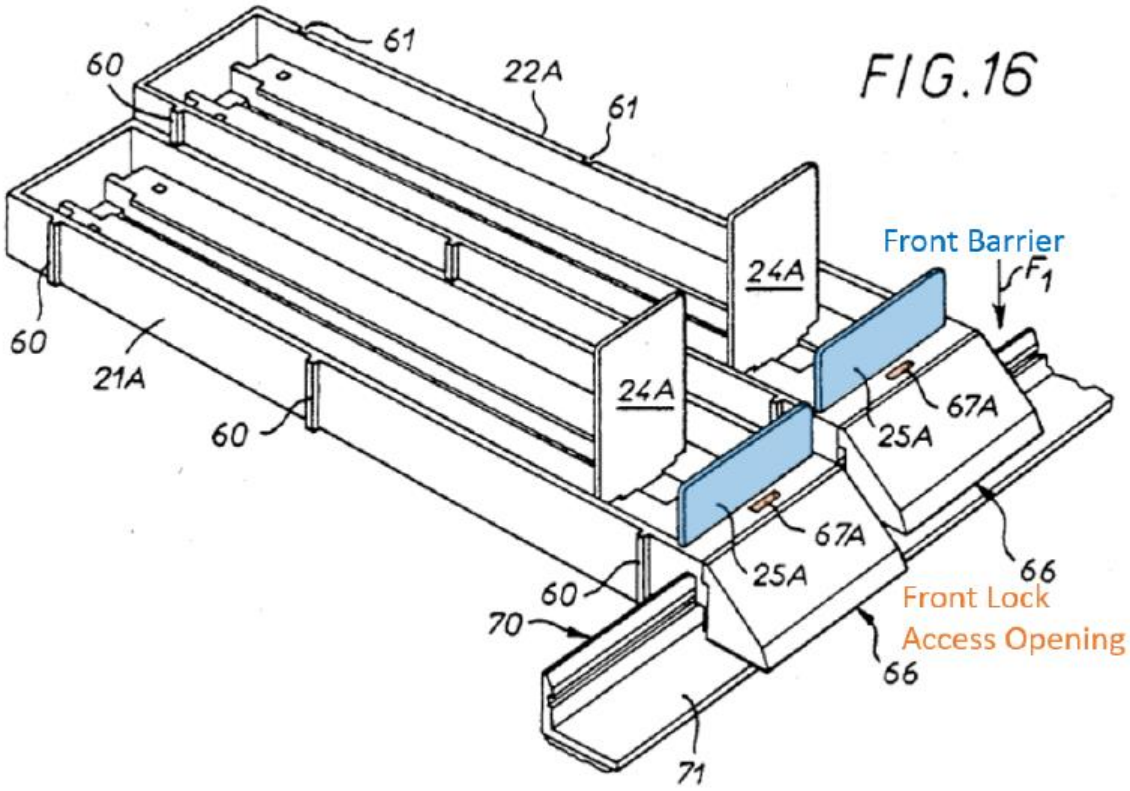


FIG. 4

Figure 4 depicts a disengaged divider member and mounting member of Merit's shelf management system. Ex. 1004, 2:51–53. We find Merit's current "barrier," or baffle plate 20, to be straightforward, as it utilizes slot 13 within mounting member 7 for holding a variably-sized baffle plate 20 to prevent variably-sized products from falling off the front shelf. *See id.* at 4:56–58, 4:62–64.

Turning to Bernardin's teachings, Petitioner submits an annotated version of Bernardin's Figure 16 (Pet. 69), which we reproduce, below:



According to Petitioner, the annotated figure depicts Bernardin's "front barrier" (shown in blue) mounted to the front end of a "divider" (21A, 22A) and a "front lock" (shown in peach color) with an access opening at the front of the "front barrier." *See id.* at 68–69.

Petitioner submits that Bernardin's teaching would lead a skilled artisan to transform Merit as shown below (Pet. 70):

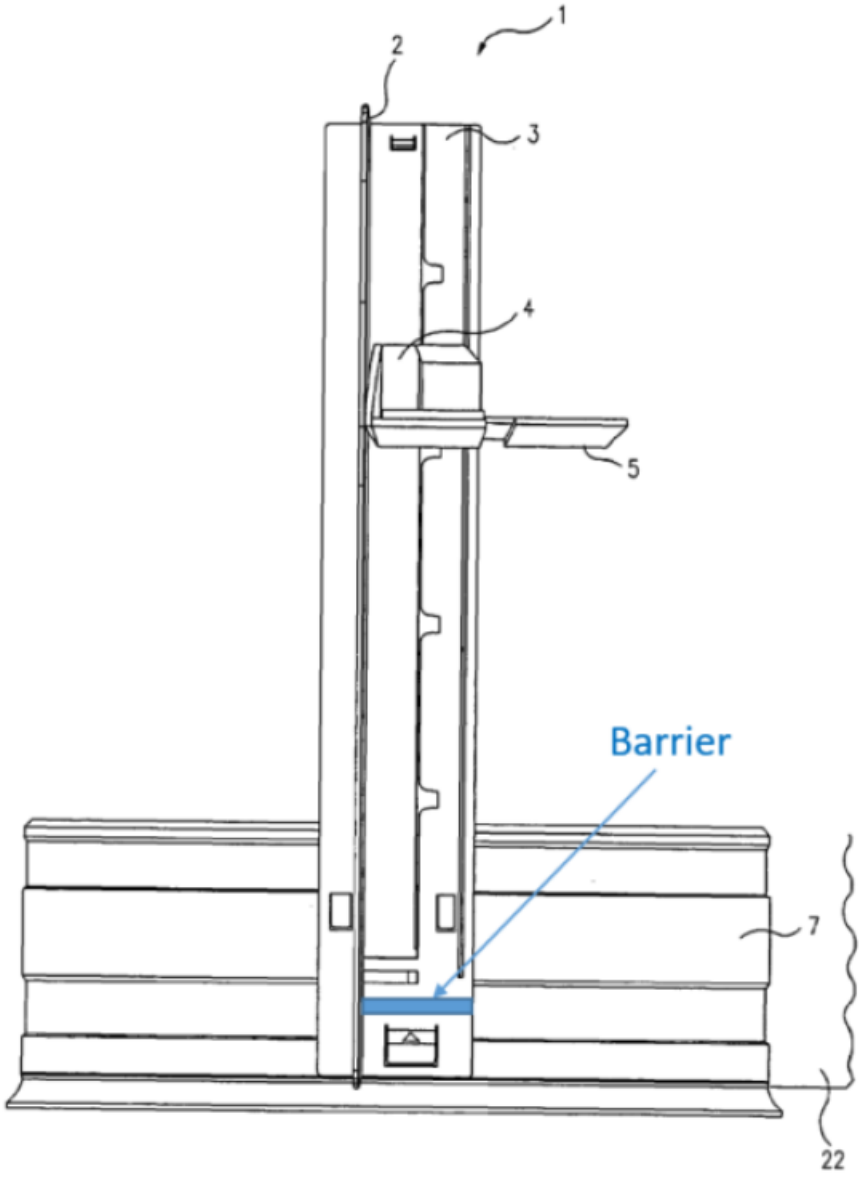


FIG. 2

The above figure is a modified version of Merit's Figure 2. *Id.* Merit's Figure 2 depicts a plan view of a shelf divider structure of a shelf management system. Ex. 1004, 2:46–47. Petitioner submits that a skilled artisan would have modified Merit by replacing Merit's baffle plate 20—which can extend along the entire length of the product and between

adjacent dividers—with the shortened "barrier" shown in blue. *See* Pet. 68–69; *see also* Ex. 2006 ¶ 203. Petitioner reasons that a skilled artisan would have "plac[ed] the barrier onto the divider, the two components could be formed of one piece, thereby reducing the number of system components and also reducing material usage by not requiring a barrier across the entire length of the front rail." Pet. 69.

Having reviewed the competing testimony of Petitioner's expert (Mr. Kemnitzer) and Patent Owner's expert (Mr. Visser), however, we agree with and credit Mr. Visser's testimony that "a POSITA would not have been motivated to adopt this configuration." Ex. 2006 ¶ 194.

We find that Petitioner's proposed modification of Merit is not simple, as it proposes to replace Merit's baffle plate 20 with a separate barrier on each of Merit's dividers (Pet. 70), which itself is not taught by Bernardin (*see* Ex. 1007, Figs. 10, 16; *see also* PO Sur-Reply 30 ("Bernardin teaches barriers [25A] inserted into slots on *two opposing walls* within a fixed-width tray")). Adding further complexity to Merit's original design is the fact that Petitioner's new "barriers" are formed as part of each "divider." Pet. 69. Petitioner explains that a skilled artisan would have "plac[ed] the barrier onto the divider, the *two components could be formed of one piece*, thereby reducing the number of system components and also reducing material usage by not requiring a barrier across the entire length of the front rail." *Id.* (emphasis added).

We are not persuaded that designing partial-width barriers formed on each divider to replace Merit's full-width baffle plate is as simple as Petitioner contends.

Notably, Merit's system utilizes dividers that slide laterally along the shelf to accommodate products of varying widths. *See, e.g.*, Ex. 1004, 1:56–65, 2:12–28. We are not persuaded that replacing Merit's full-width baffle plate 20—which varies in size but can be easily removed from the front rail (*see id.* at 4:56–64)—with *shortened barriers formed as part of Merit's dividers* would easily accommodate products of varying widths.

For example, under the proposed modification, if the barriers are too narrow, products with wide diameters may fall off or extend past the front of the shelf (e.g., a large can of coffee grounds). If the barriers are too wide, the dividers could not be adjusted narrowly to accommodate a narrow product (e.g., a vertical tube of toothpaste). In Petitioner's modified design, if wider "barriers" were desired (e.g., to accommodate a large can of coffee grounds), and because the dividers are formed as part of the barriers, the dividers would need to be removed and replaced with dividers having wider barriers.

To accommodate products of vastly varying widths, on the other hand, Merit's original design simply requires its baffle plate to be replaced, without requiring the removal of its dividers. *See* Ex. 1004, 2:12–20, 4:56–64. Indeed, Merit discloses that its "invention allows . . . the widths of the articles to be displayed to be adjusted *without having to physically remove the divider structure* from the shelves . . . merely by pressing down on a resilient extension." *Id.* at 2:12–20 (emphasis added).

We find that the proposed modification would have required extensive redesign and would have resulted in more dividers than Merit's original system. Because Petitioner's proposed design would have required the removal of the divider structure in order to change the width of the front

barrier, we are not persuaded that a skilled artisan would have found Petitioner's modification to be obvious to try or a simple substitution.

Furthermore, neither Merit nor Bernardin teach shortened barriers, which only extend partway across a product's width. *See* Ex. 2006 ¶ 203 ("Similar to Merit's baffle plate 20, [Bernardin's] abutment wall 25A extends across the entire width of the product support in each tray"). Absent any teaching from either Bernardin or Merit, we find that Petitioner's proposed modification is based on impermissible hindsight. Indeed, we find that the proposed modification is based solely on a desire to meet the claim limitation "a front barrier mounted to a front end of the divider" while maintaining Merit's functionality of slidable divider walls. *See* Ex. 1004, 1:56–65, 2:17–28.

Claim 13 also recites, "wherein the front lock is positioned in front of the barrier and is configured to be digitally accessible by a user's thumb or finger when product is on the divider floor and without having to push back product located on the divider floor." Ex. 1001, 51:22–26.

Petitioner reasons that a skilled artisan would have relocated Merit's front lock to be in front of the barrier "for the benefit of permitting access to the front lock of Merit regardless of the location of product on the divider floor, thereby saving time and improving safety for store personnel." Pet. 67 (citing Ex. 1002 ¶¶ 216, 217). Of the '007 patent, Merit, and Bernardin, however, the only one of these patent documents to explicitly teach permitting easy access when product is on the divider floor is the '007 patent. We agree with Patent Owner's contention that "[Petitioner] has not identified any teaching in the prior art that placing a barrier back from the front of a shelf to make a lock 'digitally accessible . . . when product is on

the divider floor' was desirable." PO Sur-Reply 30 (ellipsis in original). Rather, it is the '007 patent that describes this desirability:

> When located at the front end of the divider and in front of the divider wall 522 and in front of barrier 556, *the lock is digitally accessible by an individual providing maintenance to the shelf, restocking the shelf or replanogramming the shelf, even when product is on the divider floor 554 and even when the divider floor 554 is full of product* (i.e., no additional product can fit on the divider floor). The lock (such as cam 720) can be located on the divider such that the lock is in front of product when product is on the divider floor 554 and product will not interfere with access to the lock in any position of the product when the 15 product is on the divider floor 554.

Ex. 1001, 42:4–15 (emphasis added).

Given the extent of the proposed modifications, we determine that the Petition improperly uses Patent Owner's claim 13 as a guide to modify Merit's merchandising system to resemble the claimed invention. *See W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552 (Fed. Cir. 1983) ("The result is that the claims were used as a frame, and individual, naked parts of separate prior art references were employed as a mosaic to recreate a facsimile of the claimed invention."). In other words, Petitioner's modification of Merit is a bridge too far, and Petitioner's analysis is distorted by impermissible hindsight. *See KSR*, 550 U.S. at 421 ("A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning."); *Graham*, 383 U.S. at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into use of hindsight").

d) Summary of Claim 13

We find that Petitioner has not established by a preponderance of the evidence that Merit in view of Bernardin satisfies the limitations of claim 13. Petitioner has not shown that claim 13 is unpatentable over Merit and Bernardin.

3. Claims 14 and 18

Claims 14 and 18 depend directly from independent claim 13 (Ex. 1001, 51:35–38, 51:50–52) and Petitioner's challenge of claims 14 and 18 suffers from the same infirmities as its challenge to claim 13 (*see* Pet. 81–82).

For the same reasons discussed above in connection with independent claim 13, Petitioner has not established by a preponderance of the evidence that Merit in view of Bernardin satisfies the limitations of claims 14 and 18, and Petitioner has not shown that claims 14 and 18 are unpatentable over Merit and Bernardin.

H. Ground 8 – Claims 15, 19–21, and 24–26 as Unpatentable Over Merit, Bernardin, and Rataiczak

In challenging claims 15, 19–21, and 24–26 as unpatentable over Merit in view of Bernardin and Rataiczak, Petitioner relies on the same unsupportable findings and reasoning discussed above in connection with Ground 7, which proposes to combine Merit with Bernardin. *See* Pet. 82 ("It would have been obvious to combine the teachings of Merit, Bernardin, and Rataiczak for the same reasons set forth [above]").

For the same reasons discussed above in connection with Ground 7 (*supra* Part II.G.2.c), Petitioner has not established by a preponderance of

the evidence that Merit in view of Bernardin and Rataiczak satisfies the limitations of claims 15, 19–21, and 24–26, and Petitioner has not shown that claims 15, 19–21, and 24–26 are unpatentable over Merit, Bernardin, and Rataiczak.

I. Ground 9 – Claims 16 and 22 as Unpatentable Over Merit, Bernardin, Rataiczak, and Howerton

In challenging claims 16 and 22 as unpatentable over Merit in view of Bernardin, Rataiczak, and Howerton, Petitioner relies on the same unsupportable findings and reasoning discussed above in connection with Ground 7, combining Merit with Bernardin. *See* Pet. 91 (referencing Petitioner's analysis under Ground 7).

For the same reasons discussed above in connection with Ground 7 (*supra* Part II.G.2.c), Petitioner has not established by a preponderance of the evidence that Merit in view of Bernardin, Rataiczak, and Howerton satisfies the limitations of claims 16 and 22, and Petitioner has not shown that claims 16 and 22 are unpatentable over Merit, Bernardin, Rataiczak, and Howerton.

J. Grounds 2, 4, 6, and 10 – Claims 1, 2, 8, 10–12, and 26 as Unpatentable Over Merit, Alves, and Other References

Petitioner *alternatively* contends that claims 1, 2, 8, 10–12, and 16 are unpatentable over at least Merit *and Alves*. *See* Pet. 5. As distinguished from Ground 1, in which Petitioner contends that claims 1, 2, 10, and 12 are *anticipated by Merit*, Petitioner's alternative challenges (based on Merit and Alves) are premised on a contingent claim construction that has not been argued by Petitioner or Patent Owner.

In particular, Petitioner relies on Alves in the event that we construe the claimed "front lock moves the floor *out of engagement* with the front rail" to mean "front lock moves the floor *out of contact* with the front rail." *See* Pet. 45 (citing Ex. 1002 ¶¶ 135–137) (emphases added). Petitioner does not actually proffer this claim construction, however. *See id.* at 13 (explaining that "[i]n a prior case not involving the '007 Patent, Petitioner proposed a construction of the 'front lock moves the floor out of contact with the front rail'" (quoting Ex. 1016, 12)).

Patent Owner does not propose this claim construction, either. *See* PO Resp. 7–33. Rather, Patent Owner argues that "[t]he Board thus need not consider [these] grounds that rely on this combination (grounds 2, 4, 6, 10)." *Id.* at 89.

We agree with Patent Owner that we need not consider these grounds. These grounds are contingent on a claim construction that neither party advances and that we do not adopt. The contingency has not occurred and any analysis under these grounds would be academic. *See, e.g.*, *Intex Recreation Corp. v. Bestway (USA) Inc.*, IPR2019-00454, Paper 34 at 64 (PTAB June 22, 2020) (Final Written Decision) ("we need not address the merits of . . . contingent grounds based on a claim construction we have not adopted").

Moreover, these grounds that rely on Alves (Grounds 2, 4, 6, and 10) do not overcome the Petition's infirmities as to claims 12–16, 18–22, and 24–26 addressed under Grounds 1, 7, 8, or 9. *See* Pet. 45–52, 56–57, 64–65, 92–93.

Because Petitioner submits these grounds under a contingency that has not occurred, Petitioner has not established by a preponderance of the evidence

that Merit *and Alves* in view of the other cited art (i.e., the art relied on under Grounds 2, 4, 6, and 10) renders any of claims 1, 2, 8, 10–12, or 26 unpatentable.

III. CONCLUSION

Petitioner has shown that claims 1, 2, 8, 10, and 11 of the '007 patent are unpatentable. Petitioner has not shown that claims 12–16, 18–22, and 24–26 of the '007 patent are unpatentable.

Claims	**35 U.S.C. §**	**Reference(s)/Basis**	**Claims Shown Unpatentable**	**Claims Not Shown Unpatentable**
1, 2, 10, 12	102	Merit	1, 2, 10	12
1, 2, 10, 12	103	Merit, Alves		1, 2, 10, 12
8	103	Merit, Howerton	8	
8	103	Merit, Alves, Howerton		8
11	103	Merit, Rataiczak	11	
11	103	Merit, Alves, Rataiczak		11
13, 14, 18	103	Merit, Bernardin		13, 14, 18
15, 19–21, 24–26	103	Merit, Bernardin, Rataiczak		15, 19–21, 24–26
16, 22	103	Merit, Bernardin, Rataiczak, Howerton		16, 22
26	103	Merit, Alves, Bernardin, Rataiczak		26
Overall Outcome			1, 2, 8, 10, 11	12–16, 18–22, 24–26

IV. ORDER

Weighing the evidence of the disclosure of the references, the competing testimony, and the reasoning to combine the references, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 8, 10, and 11 of the '007 patent are unpatentable.

A party seeking judicial review of this Final Written Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.[2]

[2] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this Decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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