

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VOLUME DISTRIBUTORS, INC.,

Petitioner,

v.

SIMPLEHUMAN LLC,

Patent Owner

Case IPR2024-00050

U.S. Patent No. 10,683,165 B2

Title: TRASH CAN ASSEMBLY

PETITION FOR *INTER PARTES* REVIEW OF

U.S. PATENT NO. 10,683,165 B2

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Standing and Eligibility	2
III.	Claim Construction	2
IV.	Summary of Challenged Patent 10,683,165	3
A.	Summary of the Patented Trash Can Assembly.....	3
B.	Prosecution of Parent Application 13/787,638: Examiner Castillo Repeatedly Rejected Similar Elements	5
C.	Prosecution of Patent 10,683,165: New Examiner Allowed It After One Afternoon of Searching.....	8
V.	Level of Ordinary Skill in the Art.....	10
VI.	Grounds.....	10
VII.	Summary of the Prior Art	11
A.	Summary of Yang '865	11
B.	Summary of Yang '532	12
C.	Summary of Miller	12
D.	Summary of Koda	16
VIII.	Ground I: Obvious Over Yang '865 and Miller	17
A.	Claim 1	17
1.	[1.Pre] <i>A trash can assembly comprising:</i>	17
2.	[1.1] <i>a body component comprising a lower base, an upper opening, and a front upper edge; and</i>	18
3.	[1.2] <i>a lid assembly configured to couple with the body component, the lid assembly comprising:</i>	19
4.	[1.3] <i>a lid configured to rotate, relative to the body [component], between a lower position and an upper position; and</i>	20
5.	[1.4] <i>a trim member configured to rotate between a closed position and an open position, wherein:</i>	21
6.	[1.5] <i>in the closed position, a front of the trim member is adjacent the front upper edge of the body component; and</i>	22

7.	[1.6] <i>in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component; and</i>	24
8.	[1.7] <i>a power transmission device configured to drive the lid between the lower position and the upper position; and</i>	25
9.	[1.8] <i>a retaining mechanism configured to maintain the trim member in the open position against the force of gravity.</i>	27
B.	Claim 2: <i>The trash can assembly of claim 1, wherein the retaining mechanism comprises a detent.</i>	33
C.	Claim 10	35
1.	[10.Pre] <i>The trash can assembly of claim 1,</i>	35
2.	[10.1] <i>wherein the trim member further comprises an exterior wall that extends:</i>	35
3.	[10.2] <i>generally parallel with a longitudinal axis of the trash can;</i>	36
4.	[10.3] <i>downward beyond an upper lip of the body component;</i>	38
5.	[10.4] <i>and radially outward from the upper lip of the body component.</i>	39
D.	Claim 11: <i>The trash can assembly of claim 1, wherein the body component has a rectangular shape.</i>	40
E.	Claim 15: <i>The trash can assembly of claim 1, wherein the power transmission device comprises a footpedal.</i>	40
IX.	Ground II: Obvious Over Yang '865, Miller, and Yang '532	41
A.	Claim 7	41
1.	[7.Pre] <i>The trash can assembly of claim 1, wherein:</i>	41
2.	[7.1] <i>a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position; and</i>	41
3.	[7.2] <i>a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position.</i>	46
B.	Claim 13: <i>The trash can assembly of claim 1, wherein the power transmission device comprises a motor.</i>	47
X.	Ground III: Obvious Over Koda and Miller	49
A.	Claim 1	49

1.	[1.Pre] <i>A trash can assembly comprising:</i>	49
2.	[1.1] <i>a body component comprising a lower base, an upper opening, and a front upper edge; and</i>	49
3.	[1.2] <i>a lid assembly configured to couple with the body component, the lid assembly comprising:</i>	52
4.	[1.3] <i>a lid configured to rotate, relative to the body [component], between a lower position and an upper position; and</i>	54
5.	[1.4] <i>a trim member configured to rotate between a closed position and an open position, wherein:</i>	56
a.	Retaining Ring Interpretation	57
b.	Lid Rim Interpretation	58
6.	[1.5] <i>in the closed position, a front of the trim member is adjacent the front upper edge of the body component; and</i>	61
a.	Retaining Ring Interpretation	61
b.	Lim Rim Interpretation	63
7.	[1.6] <i>in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component; and</i>	65
a.	Retaining Ring Interpretation	65
b.	Lid Rim Interpretation	67
8.	[1.7] <i>a power transmission device configured to drive the lid between the lower position and the upper position; and</i>	70
9.	[1.8] <i>a retaining mechanism configured to maintain the trim member in the open position against the force of gravity.</i>	75
a.	Retaining Ring Interpretation	75
b.	Lid Rim Interpretation	80
B.	Claim 2: <i>The trash can assembly of claim 1, wherein the retaining mechanism comprises a detent.</i>	83
a.	Retaining Ring Interpretation	83
b.	Lid Rim Interpretation	87
C.	Claim 10	90
1.	[10.Pre] <i>The trash can assembly of claim 1,</i>	90

2.	[10.1] <i>wherein the trim member further comprises an exterior wall that extends:</i>	90
3.	[10.2] <i>generally parallel with a longitudinal axis of the trash can;</i>	92
4.	[10.3] <i>downward beyond an upper lip of the body component;</i>	93
5.	[10.4] <i>and radially outward from the upper lip of the body component.</i>	94
D.	Claim 11: <i>The trash can assembly of claim 1, wherein the body component has a rectangular shape.</i>	96
E.	Claim 15: <i>The trash can assembly of claim 1, wherein the power transmission device comprises a footpedal.</i>	97
XI.	Ground IV: Obvious Over Koda, Miller, and Yang '532.....	98
A.	Claim 7	98
1.	[7.Pre] <i>The trash can assembly of claim 1, wherein:</i>	98
2.	[7.1] <i>a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position; and</i>	99
3.	[7.2] <i>a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position.</i>	100
B.	Claim 13: <i>The trash can assembly of claim 1, wherein the power transmission device comprises a motor.</i>	100
XII.	THE BOARD SHOULD NOT DENY INSTITUTION UNDER § 325(D).....	101
XIII.	THE BOARD SHOULD NOT DENY UNDER <i>FINTIV</i>	104
XIV.	CONCLUSION.....	108
XV.	FEE PAYMENT	108
XVI.	MANDATORY NOTICES UNDER §42.8(A)(1)	108
A.	Real Party-In-Interest under §42.8.(b)(1).....	108
B.	Related Matters under §42.8(b)(2).....	108
C.	Lead and Back-Up Counsel under §42.8(b)(3)	108
D.	Service Information	109

TABLE OF AUTHORITIES

Cases

<i>Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH,</i> IPR2019-01469, Paper 6 (PTAB Feb. 6, 2020)	101, 102, 103
<i>Apple Inc. v. Fintiv, Inc.,</i> IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020)	104
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG,</i> IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)	102
<i>Sotera Wireless, Inc. v. Masimo Corp.,</i> IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020)	107

Statutes

35 U.S.C. § 102(a)	11
35 U.S.C. § 102(b)	10, 11
35 U.S.C. § 102(e)	11
35 U.S.C. § 103	10, 17, 49
35 U.S.C. § 325(d)	101
37 C.F.R. § 42.104(a)	2

LIST OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 10,683,165 B2 to Yang, et al. (filed October 13, 2017, issued June 16, 2020) (“’165 patent”)
1002	Public file history of the ’165 Patent
1003	Declaration of Prof. Visser
1004	Public File History of App. 13/787,638 (Pat. 9,790,025)
1005	Pat. 4,953,740 to Koda (“Koda”)
1006	US Pat. 4,753,367 to Miller (“Miller”)
1007	Publication 2010/0147865 to Yang (“Yang ’865”)
1008	Publication 2009/0194532 to Yang (“Yang ’532”)
1009	Simplehuman’s Disclosure of Asserted Claims and Infringement Contentions
1010	Order Setting Pretrial Deadlines (Dkt. 22)
1011	Simplehuman’s Proposed Constructions for Identified Patent Claim Terms
1012	U.S. Patent No. 2,888,307 to Graves et al.
1013	U.S. Patent No. Patent 4,996,467 to Day
1014	Design Patent D672520S1 to Yang et al.

I. Introduction

U.S. Patent 10,683,165 (“’165 Patent”) should never have issued. It does not claim any new, groundbreaking invention that improves technology, nor does it otherwise contribute to the progress of science and the arts. Instead, it merely claims a trash can with a body, lid, trim (for securing trash bags), “power transmission device” for lifting the lid, and a retaining mechanism that causes the trim to stay open when changing trash bags. Ex. 1001 at claim 1. These elements received rejections from Examiner Castillo during examination of a parent application, before Examiner Luo took over the family. Examiner Luo allowed the claims to eventually claims in the ’165 Patent after one afternoon of searching 653 references and signing off on those 653 references as considered that same day, without issuing any rejections.

All claimed components of the trash cans were already disclosed in the Patent Owner’s own 102(b) publications and in other publications like Koda and Miller. The claim element covering a retaining mechanism that lets the trim stay open does not save the claim because it was taught by Patent 4,753,367 back in 1988. Ex. 1006 at 5:21–6:17, Figs. 13–17. It was simple and obvious to incorporate this retaining mechanism to catch the trim and keep it so that users have two free hands to change trash bags. Dependent claims, such as the lid-within-a-trim of claim 7 and motorized variation of claim 10, were disclosed in the patent owner’s previous publication in 2009. Ex. 1008 at [0005], Figs. 1, 3.

II. Standing and Eligibility

Petitioner certifies under 37 C.F.R. § 42.104(a) that the challenged patent “is available for *inter partes* review and that the Petitioners are not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in the petition” because Patent Owner sued the Petitioner alleging infringement of the challenged patent less than one year ago on March 24, 2023.

III. Claim Construction

For purposes of institution, the Board may apply the claim constructions asserted by Patent Owner in litigation. Petitioner submits the claims are invalid under any reasonable construction. Patent Owner argued for the following constructions in the table below. Ex. 1011.

<u>Term</u>	<u>Construction</u>
“trim member,” claims 1, 7, 10	Plain and ordinary meaning, which is an externally ¹ visible ornamentation member
“detent,” claim 2	Plain and ordinary meaning, which is a catch that

¹ Patent Owner argues for the perspective of *external* visibility, regardless of whether a lid is open or closed, likely because the position of a lid is not part of the definition of “trim member.”

	prevents motion until released
“longitudinal axis,” claims 10	Plain and ordinary meaning, which is the long axis
“power,” claims 1, 13, 15	Plain and ordinary meaning (opposing the more limited proposal “electric power”)
“power transmission device” in claims 1, 13, 15	Plain and ordinary meaning
All other terms	Plain and ordinary meaning; not indefinite.

IV. Summary of Challenged Patent 10,683,165

A. Summary of the Patented Trash Can Assembly

The patented technology is a “trash can assembly.” Ex. 1001, title. The trash can assembly of claim 1 includes a body component and a lid assembly that rotates between a lower (closed) position and upper (open) position. *Id.* at 17:14–20.

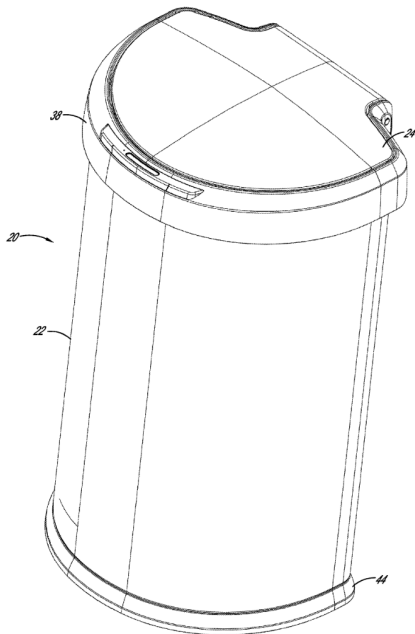


FIG. 1

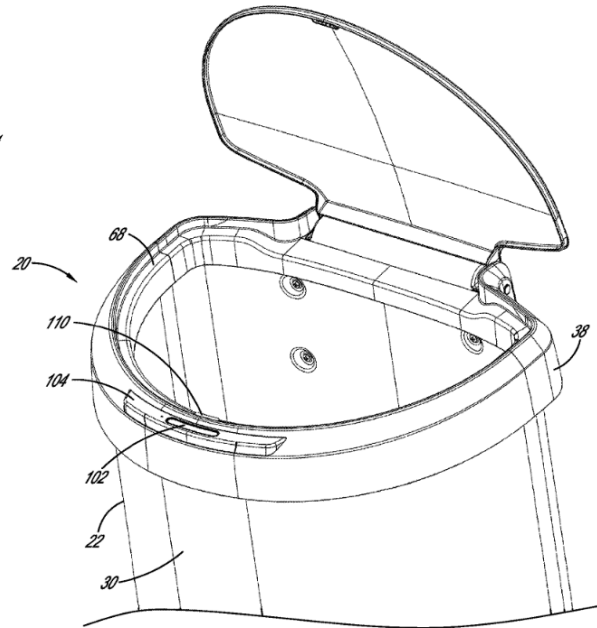


FIG. 2

Ex. 1001 at Figs. 1–2. The lid assembly also includes a “trim member” (38 in the Figures) that likewise rotates between a closed and open position. *Id.* at 9:43–11:17, 17:21–28. In Figure 2 above, the lid is open while the trim remains against the body.

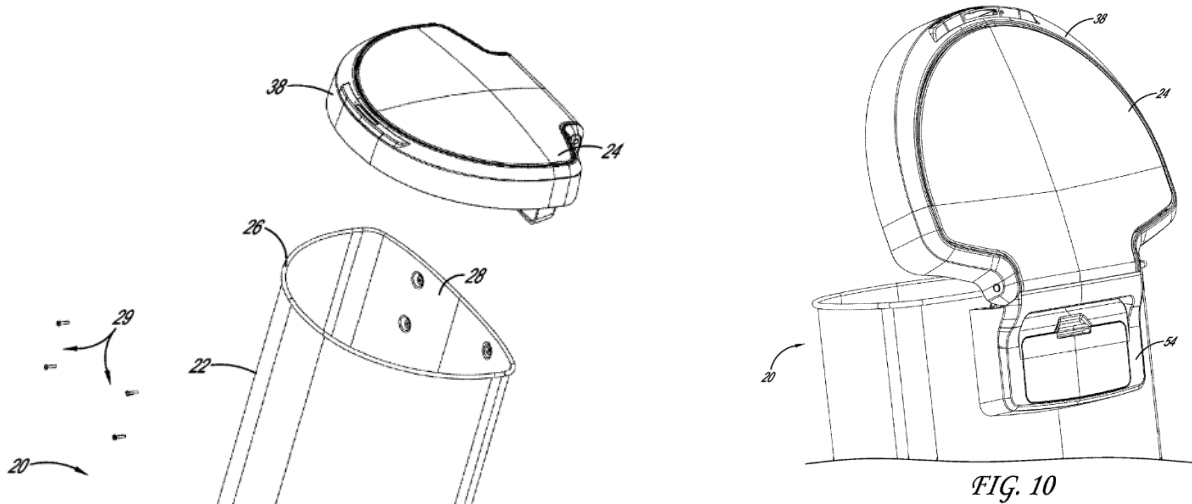


FIG. 10

Id. at Figs. 4 (cropped), 10. As illustrated in Figures 2, 4, and 10, the trim member rotates between open and closed positions. *Id.* at 17:21–28. When closed, the trim is

adjacent to the front upper edge of the body, and when opened, the trim is higher than the front upper edge of the body. *Id.* at 17:21–28, Figs. 1, 2 and 4 (showing closed trim), Fig. 10 (showing opened trim). When the trim member is in the open position, a retaining mechanism maintains the trim in the open position against the force of gravity. *Id.* at 17:31–33. This way, a user can change the trash bag before closing the trim. *Id.* at 10:1–5, 10:29–35.

The trash can assembly of claim 1 also includes “a power transmission device configured to drive the lid between the lower position and the upper position.” Ex. 1001 at 17:29–30. Examples of lid driving mechanisms include a drive motor, shaft, axel, transmission member, and foot pedal. *Id.* at 11:42–12:5, 18:13–14, 18:22–23.

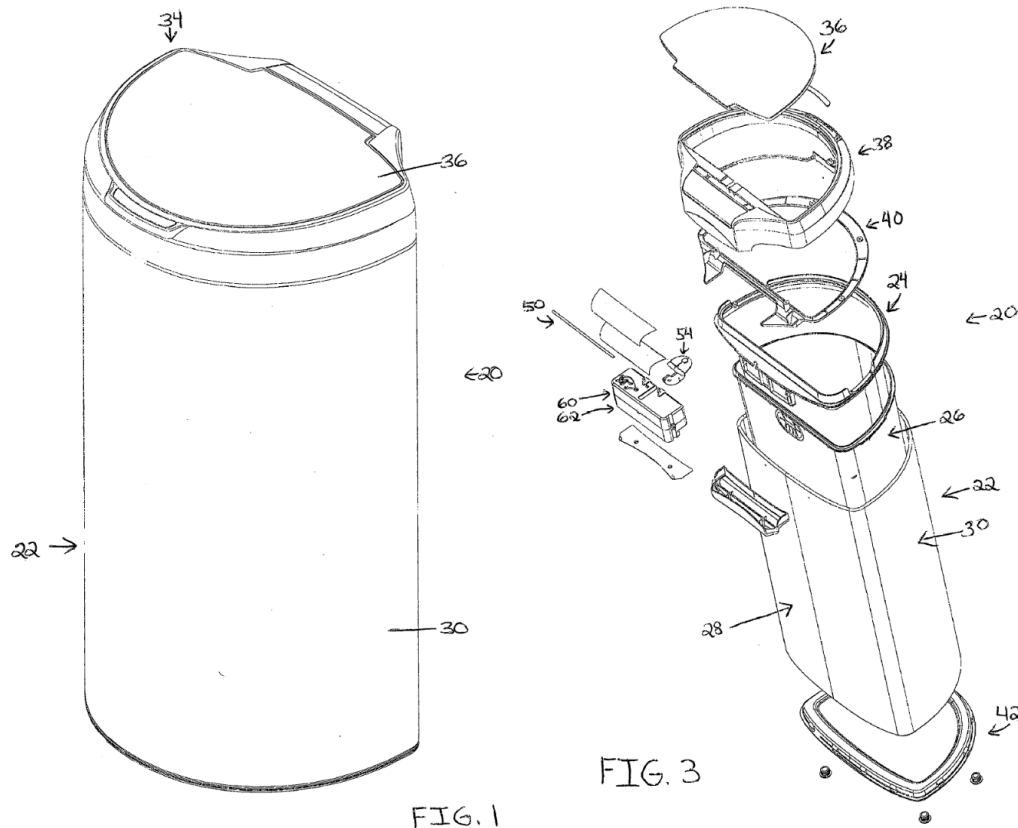
B. Prosecution of Parent Application 13/787,638: Examiner

Castillo Repeatedly Rejected Similar Elements

The '165 Patent continues from application 13/787,638 (“’638 Application”) filed on March 6, 2013. Ex. 1001 at cover. Original Claim 1 in the '638 Application covered a trash can assembly with a body, pivoting trim member, and pivoting lid, similar to the claim 1 of the '165 patent, but without requiring a power transmission device or retaining mechanism. *Compare* Ex. 1004 at 34 *with* Ex. 1001 at 17:14–28. Original Claim 7 required a lid that opened and closed along with a “power operated driving mechanism” and a “clutch mechanism.” *Id.* at 35. After a restriction requirement, Applicant elected to proceed with examination of claim 7 and new claim

25. *Id.* at 1136–40, 1144–48.

Examiner Castillo then rejected the claims over Publication 2009/0194532 to Yang (“Yang ’532”) under pre-AIA 102(b). *Id.* at 1266. Yang ’532 shows a trash can with a similar body, lid, and trim:



Ex. 2009/0194532 at Fig. 1, Fig. 3. Examiner Castillo found that Yang ’532 shows the claimed “body component” and “a lid [34] mounted relative to the body component and configured to move between open and closed positions [abstract], the lid [34] having a lid driving mechanism [54].” Ex. 1004 at 1266–68. Examiner Castillo found that Yang ’532 “discloses a trim member [38], the trim member and the lid being configured to rotate about the same axis,” and that when combined with

another Publication 2010/0147865 (“Yang ’865), it was obvious that the trim member stayed open. *Id.* at 1144–46 (listing claims 7, 25, 29), 1269 (rejecting claim 25 directed to a trim rotating about the same axis as the lid), 1271 (rejecting claim 29 directed to a retaining mechanism to maintain the trim member).

To overcome the rejection, the applicant amended the claim to recite “a biasing member configured to bias the clutch mechanism,” such as a spring that makes it easier to open the lid. *Id.* at 1308. However, Examiner Castillo issued another § 102 rejection based on Yang ’532, again finding that the body, lid, and lid driving mechanism were anticipated, along with the biasing member. *Id.* at 1615–16. Examiner Castillo again noted that Yang ’532 discloses a trim member configured to rotate about the same axis the lid does. *Id.* at 1618 (rejecting claim 25). Again, when combined with Yang ’865, the retaining mechanism to keep the lid in the open position was still obvious. *Id.* at 1621 (rejecting claim 29).

To overcome the rejection, the applicant amended the claim to recite, “wherein the clutch mechanism is configured to translate along, and rotate about, the shaft.” *Id.* at 1760. Examiner Castillo issued a § 103 rejection based on the ’532 Publication in view of JP Patent Publication JP2004-106713 to Fukui (“Fukui”). According to Examiner Castillo, the ’532 Publication taught the body, lid, lid driving mechanism and the biasing member, as well as a trim member configured to rotate about the same axis the lid does. *Id.* at 1855–60. Fukui was relied on for teaching the clutch

mechanism configured to translate along, and rotate about, the shaft. *Id.* at 1855–58. Again, when further combined with Yang ’865, the retaining mechanism to keep the lid in the open position was still obvious. *Id.* at 1863 (rejecting claim 29).

To overcome the rejection, the applicant amended the claim to further recite that the shaft that the clutch mechanism is configured to translate along and rotate about is “in the assembled trash can assembly.” *Id.* at 1907. This finally resulted in allowance. *Id.* at 2134.

Between filing and issuance, Examiner Castillo carefully reviewed references submitted by the Applicant. Examiner Castillo signed IDS’s on August 10, 2015; March 7 and December 9 of 2016; June 5 and 10 and August 3, 2017. *Id.* at 1280–99, 1304, 1626–27, 1880–81, 1899, 2138–41, 2161–65, 2169–72, 2183–84. Examiner Castillo corrected applicant errors in the IDS’s. *E.g., id.* at 2182-84 (fixing numbers and dates). Examiner Castillo searched for and reviewed prior art on September 11, 2014; January 28, July 3, August 10, and September 11 of 2015; March 6 and 7, November 29, December 1 and 9 of 2016; and June 5, 2017. *Id.* at 1273–85, 1301, 1628, 2145.

C. Prosecution of Patent 10,683,165: New Examiner Allowed It

After One Afternoon of Searching

After Examiner Castillo allowed the ’638 Application, application 15/783,370 (“’370 Application”) was filed as a continuation on October 13, 2017. Unlike its

parent, the independent claims in the original '370 Application lacked the features that Examiner Castillo found allowable: a biasing member, that a “clutch mechanism is configured to translate along, and rotate about, the shaft,” or that the shaft is “in the assembled trash can assembly.” Ex. 1002 at 34 (original claims), 209 (after preliminary amendments).

A new Examiner, David S. Luo, took over the '370 Application. On January 17, 2018, the applicant filed an IDS listing 644 references. *Id.* at 98–103. Before allowing the claims, Examiner Luo conducted one prior art search on October 8, 2019, from about 3 pm to 7 pm. *Id.* at 235. This search found only one new reference. *Id.* at 231. Examiner Luo’s search terms include giant “OR” searches for the prior art reference numbers listed in applicant’s January 17, 2018 IDS. *Id.* at 238–41. Then, that same day, Examiner Luo also signed off on all pending IDS’s submitted by the applicant—that all 653 references were considered. *Id.* at 243–269. Examiner Luo made no comments about specific references on the IDS. *Id.* Examiner Luo could not have meaningfully reviewed 653 references in one afternoon.

Then, Examiner Luo issued an allowance on October 17, 2019, without any rejection. Ex. 1002 at 224.

After allowance, the applicant made a minor amendment to the claims. *Id.* at 271, 280. Examiner Luo ran one more search for references listed by the applicant on February 5, 2020. *Id.* at 489–90, 509. The application issued as Patent 10,683,165.

V. Level of Ordinary Skill in the Art

A POSITA at the time of the claimed invention would have had a bachelor's degree in industrial design and two years of experience, or other equivalent experience (e.g., in mechanical engineering plus two years of experience). Ex. 1003 ¶ 31. More education can supplement practical experience and vice versa.

VI. Grounds

The grounds assume solely for this IPR only that the '165 Patent is entitled to claim priority to the date of provisional filing on March 9, 2012, so pre-AIA law would apply. Even under post-AIA law, each reference would qualify as prior art under the corresponding post-AIA section.

Ground 1: Claims 1, 2, 10, 11, and 15 are obvious over Publication 2010/0147865 to Yang ("Yang '865") in view of U.S. Pat. 4,753,367 to Miller ("Miller") under 35 U.S.C. § 103.

Ground 2: Claims 7 and 13 are obvious over Yang '865 and Miller in view of Publication 2009/0194532 to Yang ("Yang '532") under 35 U.S.C. § 103.

Ground 3: Claims 1, 2, 10, 11, and 15 are obvious over Patent 4,953,740 to Koda ("Koda") in view of Miller under 35 U.S.C. § 103.

Ground 4: Claims 7 and 13 are obvious over Koda and Miller in view of Yang '532 under 35 U.S.C. § 103.

Yang '865 qualifies as prior art under 35 U.S.C. § 102(b) because it is a

publication printed in 2010, and it qualifies as prior art under 35 U.S.C. § 102(e) because it is a published patent application filed by another before the invention by the applicant.

Yang '532 qualifies as prior art under 35 U.S.C. § 102(b) because it is a publication printed in 2009, and it qualifies as prior art under 35 U.S.C. § 102(e) because it is a published patent application filed by another before the invention by the applicant.

Miller was filed in 1987 and granted in 1988, so Miller is prior art under 35 U.S.C. § 102(a), (b), and (e).

Koda was filed in 1989 and granted in 1990, so Koda is prior art under 35 U.S.C. § 102(a)102(a), (b), and (e).

VII. Summary of the Prior Art

A. Summary of Yang '865

Yang '865 describes a trash can featuring a lid (30), a trim (28), and a foot pedal (36) used to raise the lid. Ex. 1007 at abstract, [0010]–[0016]. The lid and trim are attached through a hinge at the back of the body, and they pivot upward to open. *Id.* The lid opens to allow trash to be thrown in and closes to hide the trash and contain the odor. *Id.* at [0005]. When closed, the trim will sandwich and securely hold a trash bag against the top rim of the body. *Id.* at [0045].

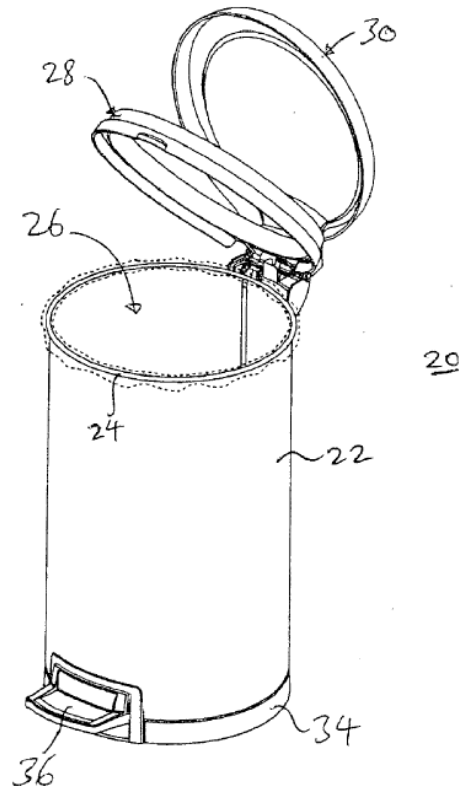


FIG. 2

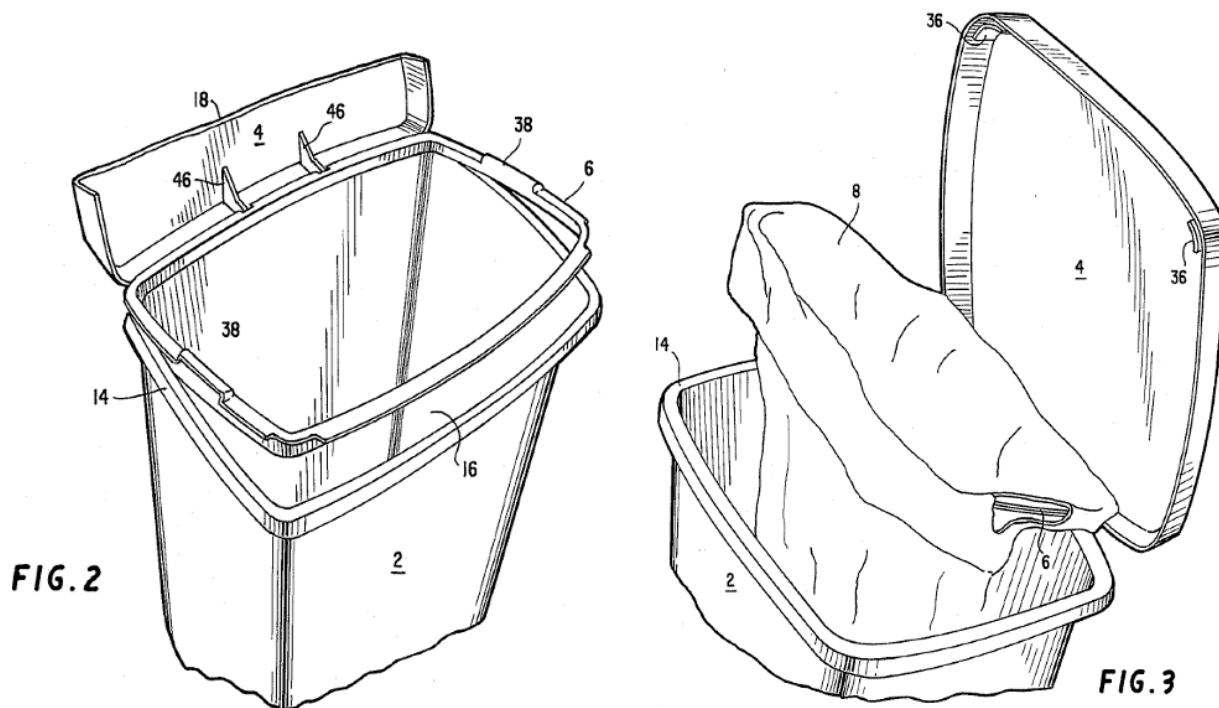
Id. at Fig. 2.

B. Summary of Yang '532

Yang '532 describes trash like Yang '865, except that instead of a foot pedal, the trash can of Yang '532 has a sensor that activates a motor to power the lid. Ex. 1008 at [0037] *et seq.*, Figs. 1–6.

C. Summary of Miller

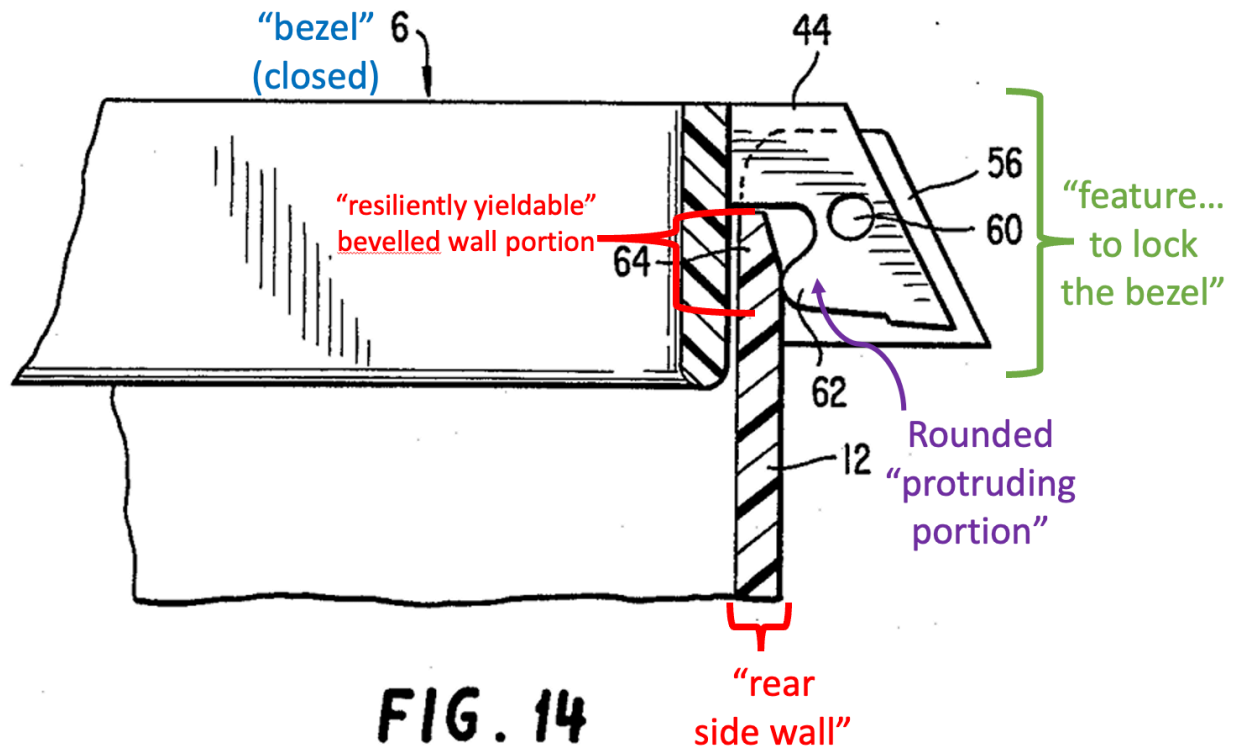
Miller also teaches a trash can with lid and bezel. Ex. Miller at Abstract. Like Yang '865, the Miller lid pivots to open and close. *Id.* And like Yang '865's trim, the Miller bezel pivots to release or secure a trash bag. *Id.* at abstract, 6:18–30.



Id. at Figs. 2–3.

Miller’s background identifies a problem with existing bag holders, that there was no way to lock the bezel (or trim) in the open position. *Id.* at 1:21–28, 1:39–53. Thus, when changing liners (trash bags), a user had to hold the bezel with one hand while changing the liner with the other. *Id.*

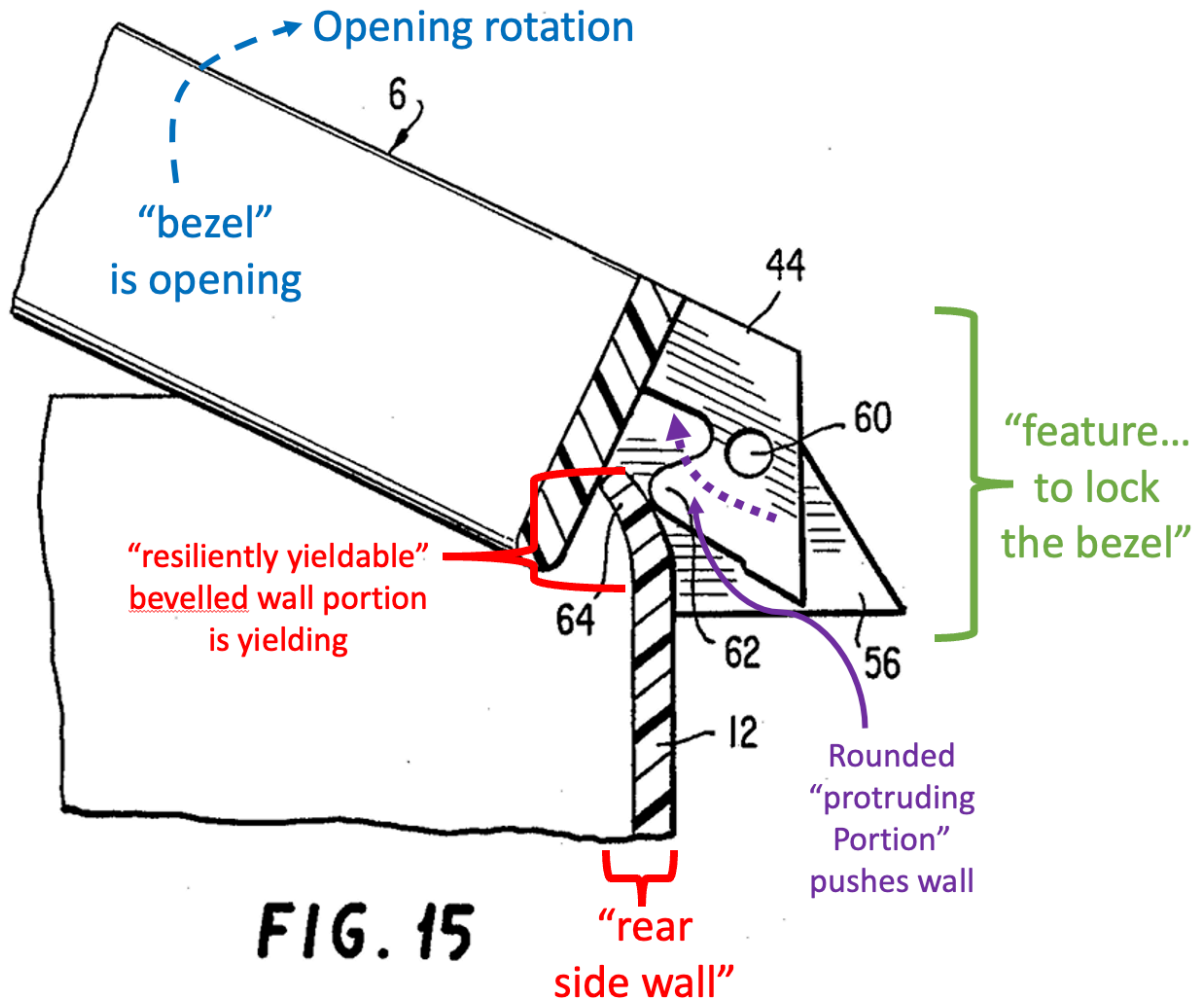
Miller solved this problem using a “feature ... to lock the bezel 6 in a raised position,” shown in Figures 13–17. *Id.* at 5:20–6:30. Miller’s bezel has hinges, each with a rounded portion protruding toward the rear wall of the trash can. *Id.* at 5:29–31. The top of the rear wall is resiliently yieldable. *Id.* at 5:36–37.



Id. at Fig. 14.²

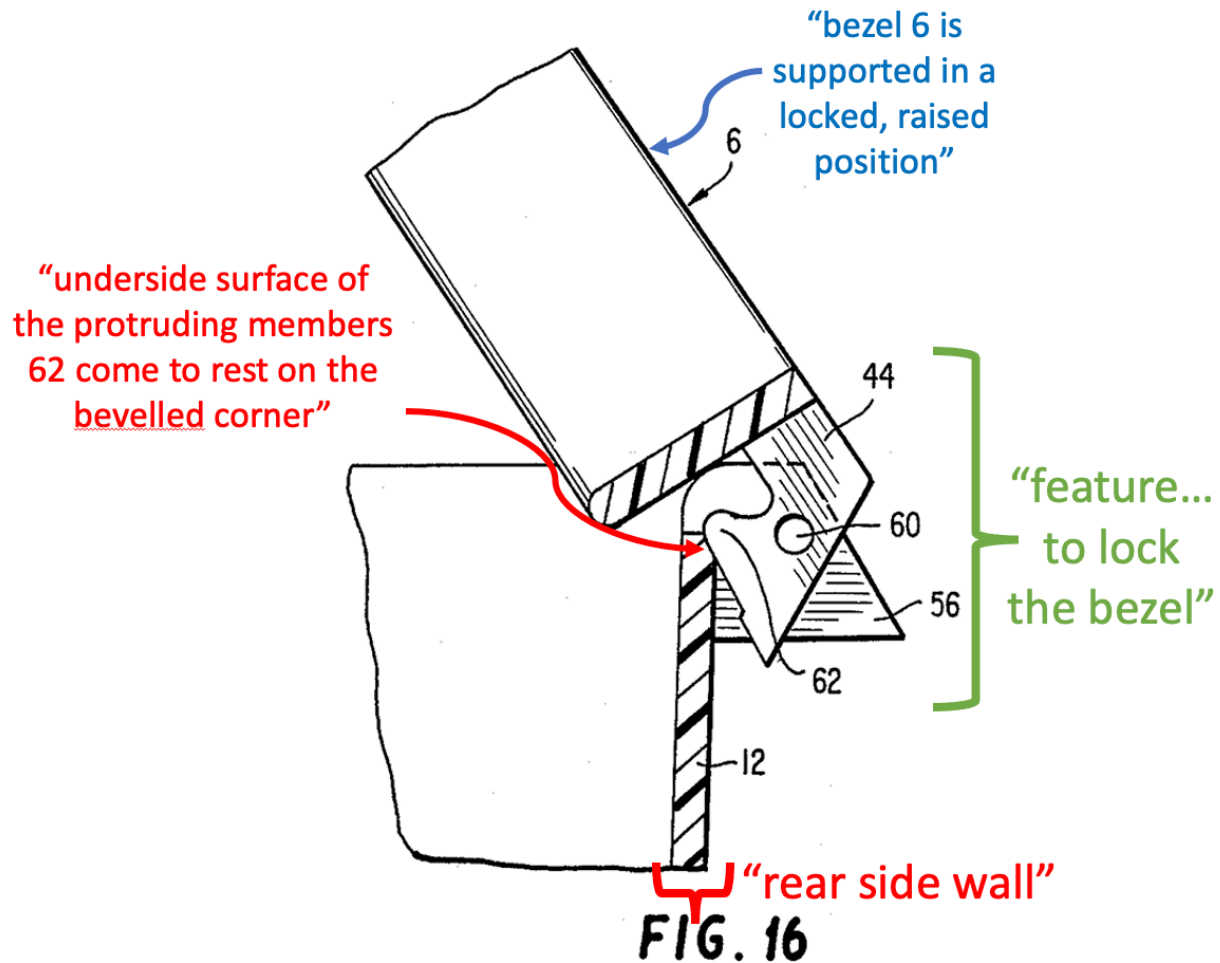
When the bezel is raised, the protruding portion pushes against and displaces the top rear wall. *Id.* at 5:41–51.

² Color indicates annotations throughout the Petition.



Id. at Fig. 15.

As the bezel continues to rotate and open, the rounded protruding portion of the hinge pushes past the upper ends of the resiliently yieldable rear wall. *Id.* at 5:52–55. Once this happens, the resiliently yieldable rear wall returns to its original, vertical position. *Id.* Then, the underside surface of the protruding members rests on the bevelled corner of the resiliently yieldable rear wall such that the bezel is in a locked, raised position. *Id.* at 55–60. This gives the user two free hands to replace the trash bag while the bezel is raised. *Id.*



Id. at Fig. 16.

From here, the “user must exert a sufficient downward force on the bezel to overcome the force exerted by the resilient side wall portions 64 on the protruding members 62 to lower the bezel onto the container rim 14.” *Id.* at 5:60–64.

D. Summary of Koda

Koda’s trash can builds on the trash can described in Miller. Ex. Koda at 8:17–23; *compare id.* at Fig. 16, with Ex. Miller Fig. 2.

Koda improves on the Miller’s design by further providing lid dampening and

by adding a bulge (or “inwardly projecting rim”) toward the back that prevents the trash bag from interfering with the hinge. Ex. Koda at 2:23–30, 8:32–49; *compare id.* at Fig. 16 (featuring bulge), *with* Ex. Miller Fig. 2 (lacking bulge).

Koda’s trash can also has a lid (6) that opens by stepping on a foot pedal. Ex. Koda at 5:3–7:68, Fig. 1. Figures 15a–d show how a linking rod pushes the lid open when someone steps on the foot pedal.

VIII. Ground I: Obvious Over Yang ’865 and Miller

A. Claim 1

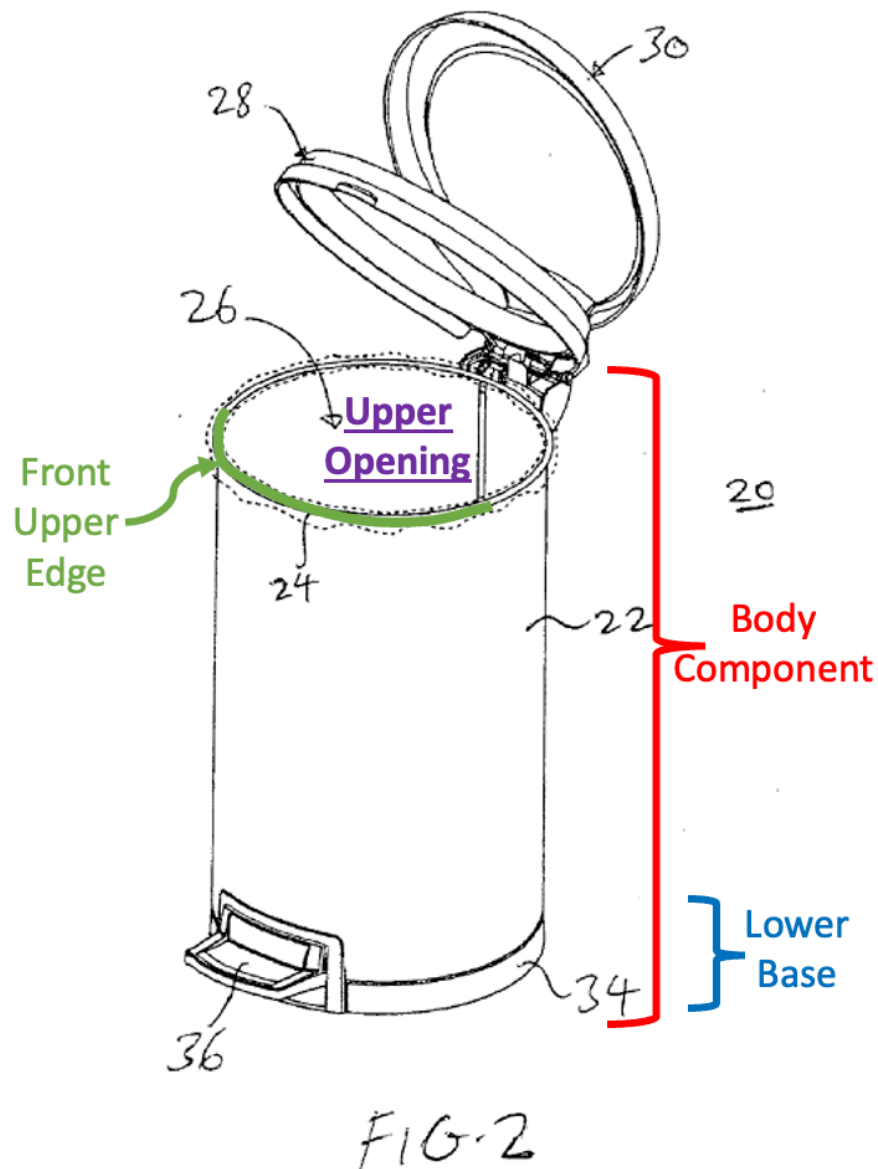
Claim 1 is obvious under 35 U.S.C. § 103 over Yang ’865 in view of Miller because it would have been obvious for a POSITA to modify the trash can of Yang ’865 by modifying the shape of the trim hinge and by making the top of the rear wall flexible as taught by Miller Figures 15–17 and descriptions thereof. This modification lets a user lock the Yang ’865 trim in a raised position when changing trash bags, freeing both hands to put in a new trash bag without having to hold the trim. Ex. 1003 ¶¶ 86, 103–16; Ex. 1006 at 5:21–26, 6:18–22.

1. [1.Pre] *A trash can assembly comprising:*

If the preamble is limiting, Yang ’865 teaches a trash can assembly. Ex. 1003 ¶ 87. Yang ’865 is titled “Step Trash Can Having Integrated Base and Base Liner,” and the whole publication describes this trash can. Ex. 1007.

2. [1.1] *a body component comprising a lower base, an upper opening, and a front upper edge; and*

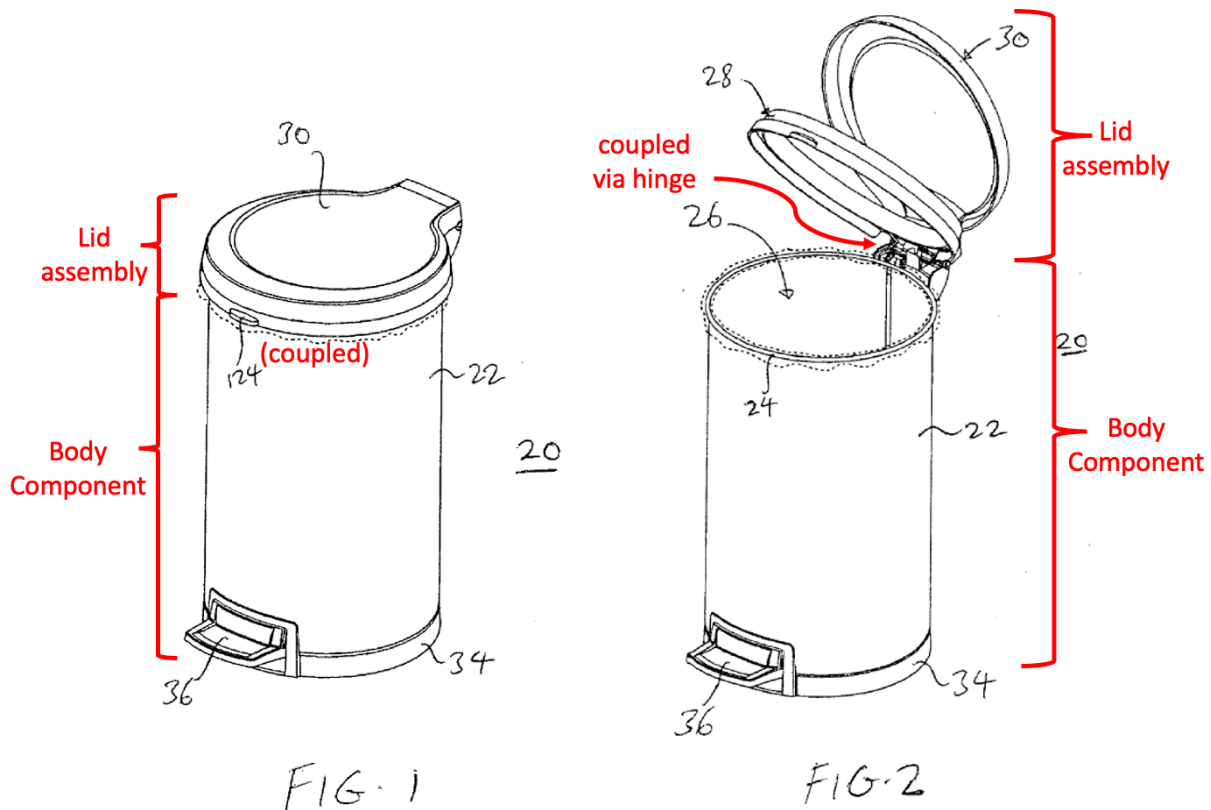
Yang '865 teaches “a body component comprising a lower base, an upper opening, and a front upper edge,” as claimed. Ex. 1003 ¶¶ 88–89. The following figure shows the body component comprising each part:



Ex. 1007 at Fig. 2; *see also id.* at Figs. 3, 4, 7, 9, 10–15. This trash assembly “includes a shell [body] having an enclosed wall that has an upper edge.” *Id.* [0012]. “The top edge of the shell 22 ... defines an opened mouth 26.” *Id.* [0034]. “The shell 22 has a base 34.” *Id.* [0035]. Thus, a POSITA would have understood that this element is disclosed by Yang ’865.

3. [1.2] a lid assembly configured to couple with the body component, the lid assembly comprising:

The Yang ’532 trash can has “a lid assembly configured to couple with the body component,” as claimed. These elements are shown:

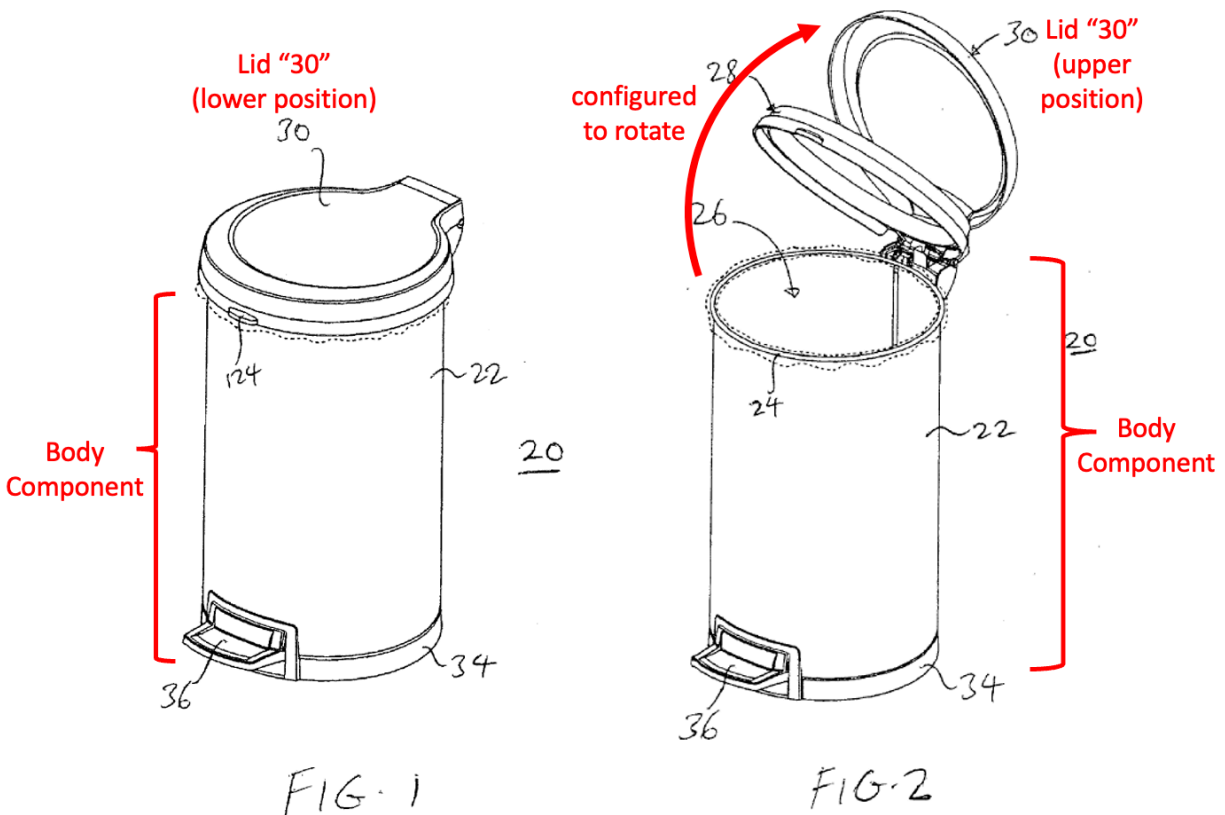


Ex. 1007 at Figs. 1–2; *see also id.* at Figs. 3–6 (showing different views). The lid

assembly further comprises the elements [1.3] (“a lid”) and [1.4] (“a trim member”) discussed in the next subsections. The trim and lid are “pivotably connected to the upper edge” of the body, meaning that the lid assembly is configured to couple with the body component. *Id.* at [0012], [0035], [0038]. The lid is also coupled to the upper edge of the body component when the lid is closed. Thus, a POSITA would have understood that this element is disclosed by Yang ’865. Ex. 1003 ¶¶ 90–92.

4. [1.3] *a lid configured to rotate, relative to the body [component], between a lower position and an upper position; and*

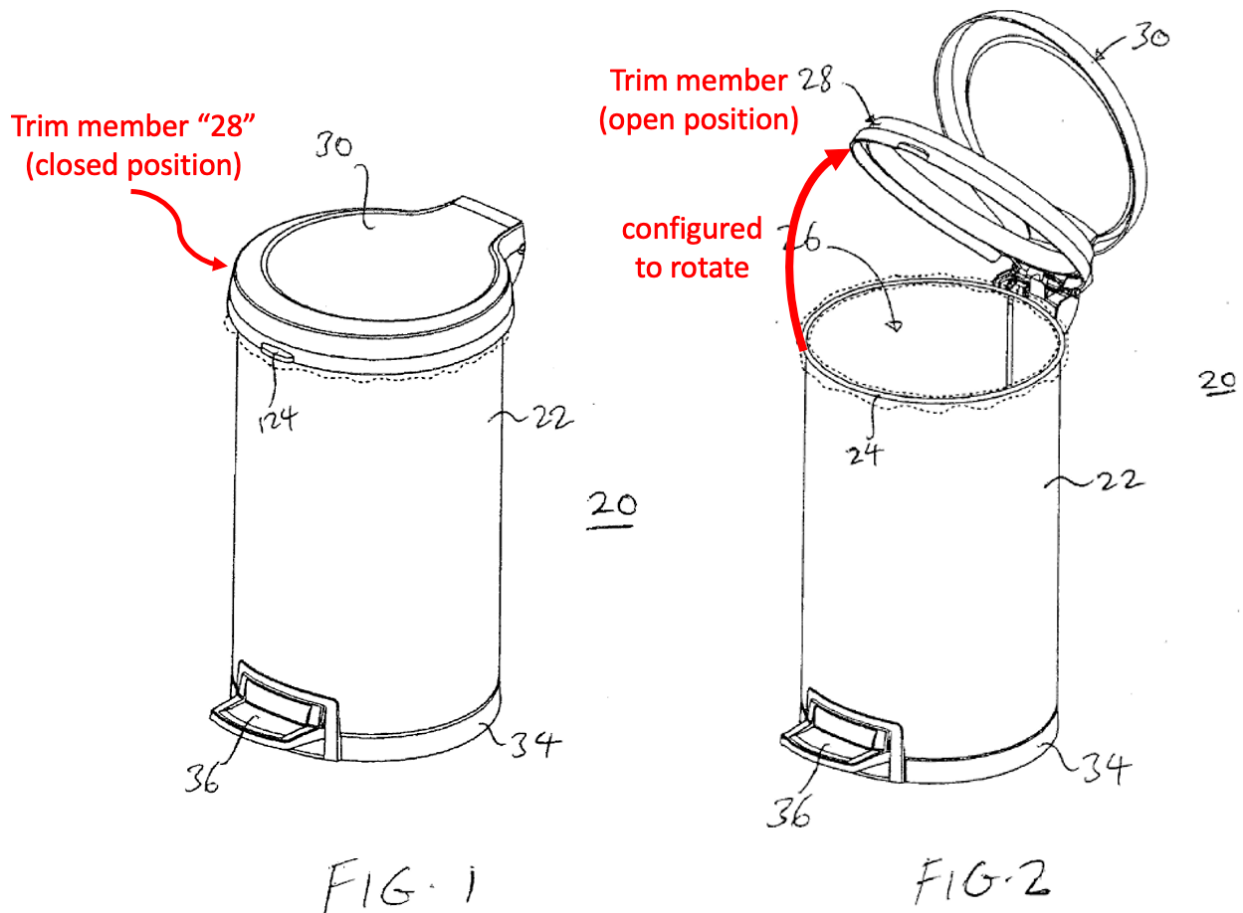
The lid assembly of Yang ’865 includes “a lid configured to rotate, relative to the body [component], between a lower position and an upper position,” as claimed. Ex. 1003 ¶¶ 93–94. The lid (30) and its rotation are shown:



Ex. 1007 at Figs. 1–2; *see also id.* at Figs. 3–6 (showing different views). Yang '865 includes “a lid pivotably connected to the upper edge,” such that when the lid pivots, it rotates between a lower position to an upper position. *Id.* at [0012], [0035], [0038]. Thus, a POSITA would have understood that this element is disclosed by Yang '865.

5. [1.4] *a trim member configured to rotate between a closed position and an open position, wherein:*

The lid assembly of Yang '865 includes “a trim member configured to rotate between a closed position and an open position,” as claimed. Ex. 1003 ¶¶ 95–96. The trim member (28) and its rotation are shown:



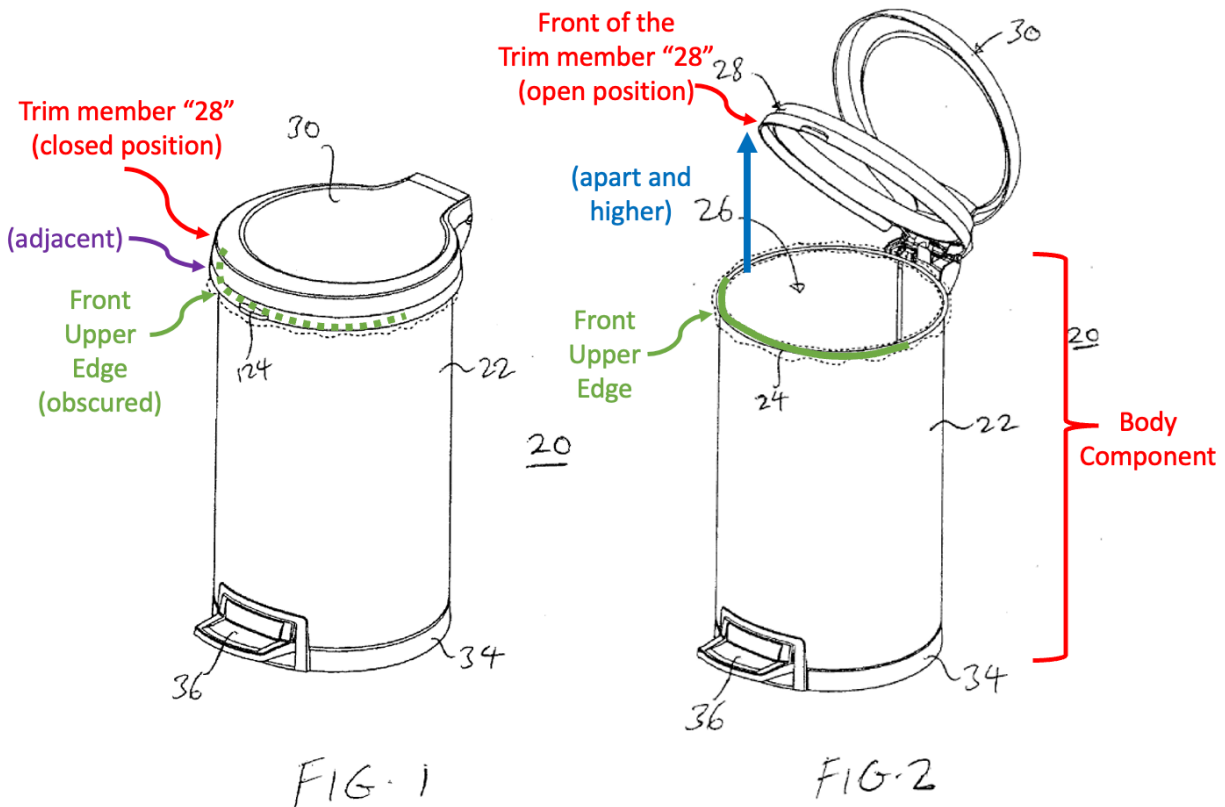
Ex. 1007 at Figs. 1–2; *see also id.* at Figs. 3–6 (showing different views). Yang '865 includes “a trim pivotably connected to the upper edge,” meaning that when the trim member pivots, it rotates between a closed position to an open position. *Id.* at [0012]–[0013], [0035], [0038]. Thus, a POSITA would have understood that this element is disclosed by Yang '865.

6. [1.5] *in the closed position, a front of the trim member is adjacent the front upper edge of the body component; and*

Yang '865 teaches that “in the closed position, a front of the trim member is

adjacent the front upper edge of the body component,” as claimed. Ex. 1003 ¶¶ 97–

98. These figures show the claimed positioning:



Ex. 1007 at Figs. 1–2. Yang ’865 includes “a trim pivotably connected to the upper edge,” and “[t]he trim is seated on the upper edge ... when the lid is closed.” *Id.* at [0012]–[0013], [0035], [0038], [0045] (“The trim 28 is then pivoted downwardly until it is rested on top of the lip 24”), [0046] (“The trim 28 securely retains the mouth of the trash bag at the lip 24 of the shell 22 the trim 28 is secured to the lip 24 of the shell 22”). Thus, a POSITA would have understood that this element is disclosed by Yang ’865.

7. [1.6] *in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component; and*

Yang '865 teaches that “in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component,” as claimed. Ex. 1003 ¶¶ 99–100. These figures show the claimed positioning:

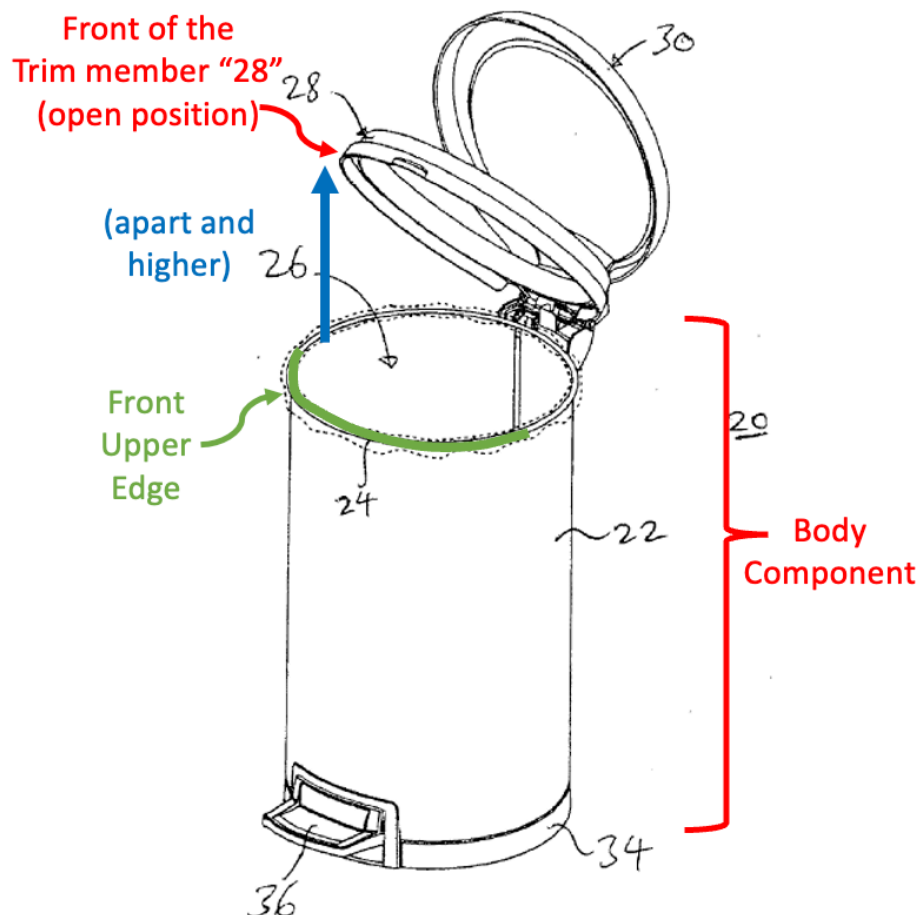
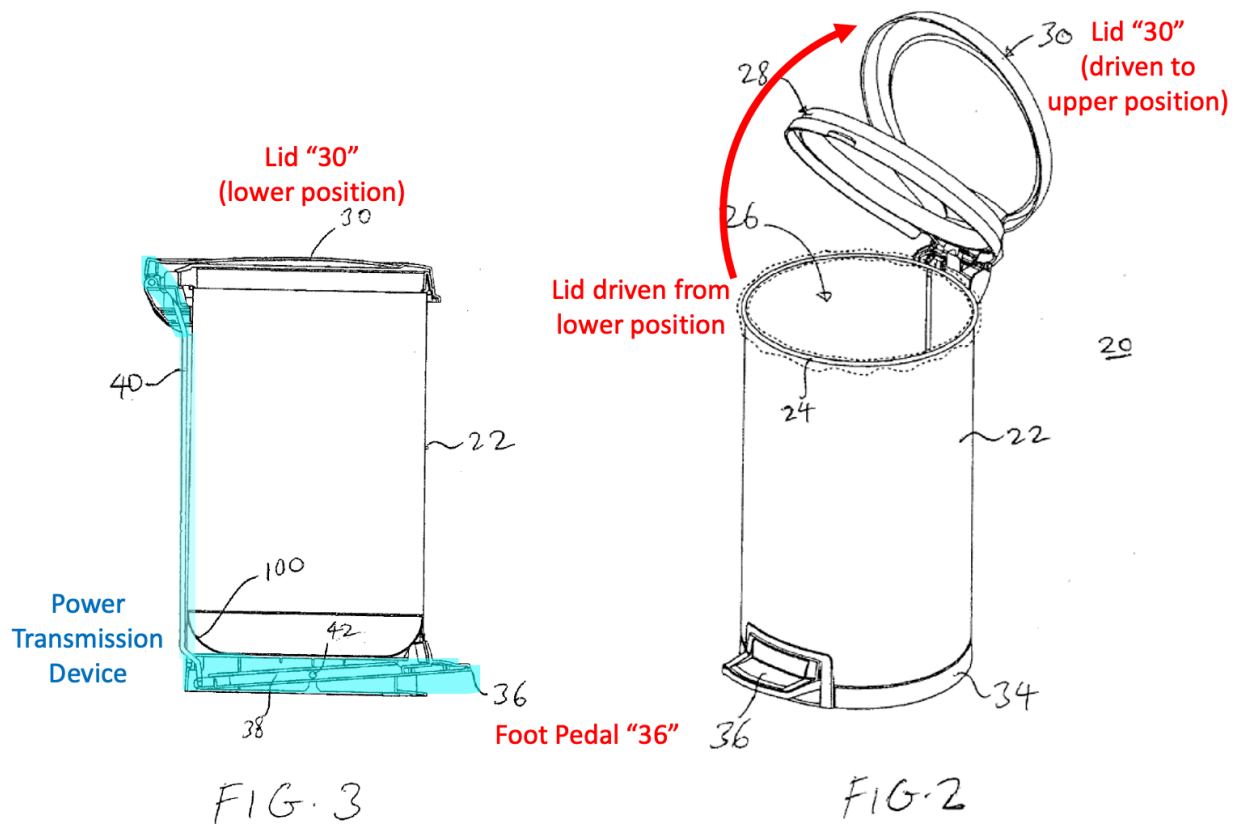


FIG. 2

Ex. 1007 at Fig. 2. To change trash bags, a user will “lift the trim 28 from the shell 22.” *Id.* at [0044]–[0045]. Because the trim is “pivotably connected to the upper edge” at the rear of the trim, lifting the trim member will rotate the front of the trim member to be spaced apart from and vertically higher than the front upper edge of the body component. *Id.* at [0012], [0035], [0038], [0040]; Ex. 1003 ¶ 100. Thus, a POSITA would have understood that this element is disclosed by Yang ’865.

8. [1.7] *a power transmission device configured to drive the lid between the lower position and the upper position; and*

Yang ’865 teaches that “a power transmission device configured to drive the lid between the lower position and the upper position,” as claimed. Ex. 1003 ¶¶ 101–02. A power transmission device configured to receive foot power at the foot pedal to drive the lid between the lower position and the upper position, as shown:



Ex. 1007 at Figs. 2–3; *see also* Figs. 4–7, 9–15 (showing alternative views). The trash can has “a pedal bar with a foot pedal end and a linkage end for coupling to a link rod for operating the lid, and a pivot axle supported by the base, which pivotally supports the pedal bar.” *Id.* at [0016]. “[A] link assembly extends from the foot pedal 36 along the base 34 and then upwardly along the shell 22 to the lid 30. The link assembly operates to translate an up-down pivot motion of the pedal 36 to an up-down pivot motion for the lid 30.” *Id.* at [0037]. When applying Patent Owner’s construction, a POSITA would have understood these components to be a power transmission device because it transmits the up-down pivot motion at the foot pedal to an up-down pivot motion for the lid. Ex. 1003 ¶ 102. Thus, a POSITA would have understood that this

element is disclosed by Yang '865.

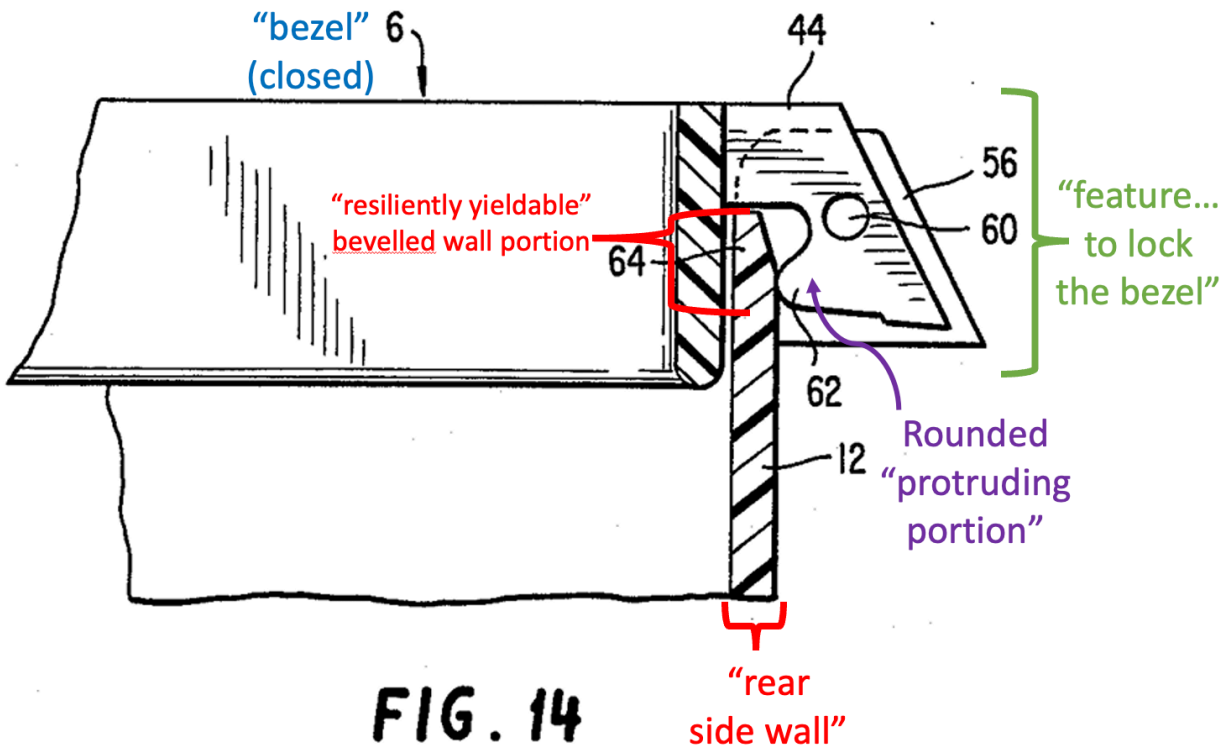
9. [1.8] *a retaining mechanism configured to maintain the trim member in the open position against the force of gravity.*

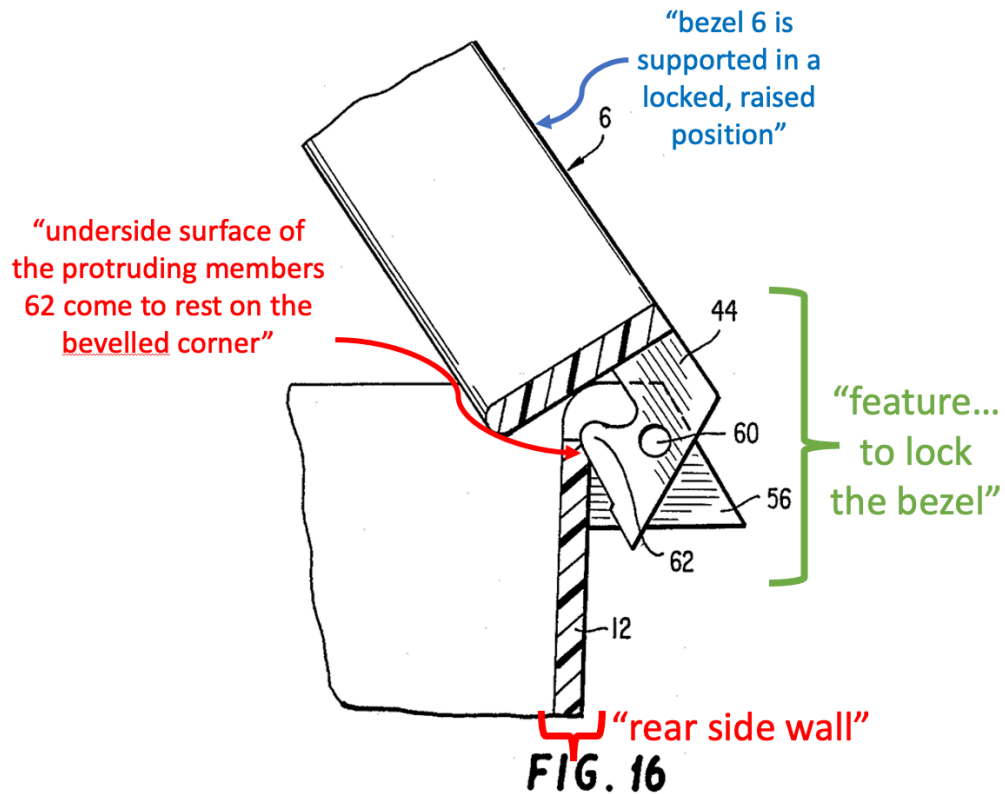
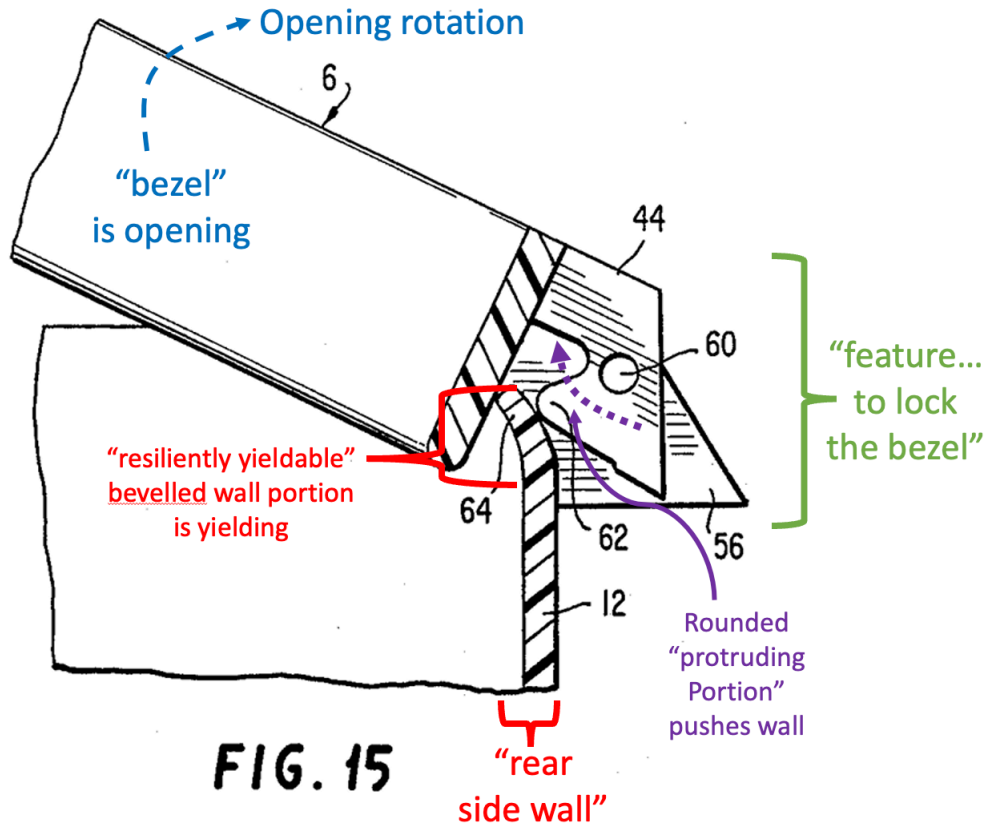
It would have been obvious to modify the Yang '865 trash to include “a retaining mechanism configured to maintain the trim member in the open position against the force of gravity,” as claimed. Ex. 1003 ¶¶ 103–16.

Yang '865 teaches that when users change trash bags, they lift the trim member, opening it against the force of gravity. Ex. 1007 at [0044]–[0045]. However, Yang '865 does not explicitly describe a retaining mechanism that maintains the trim member in this open position against the force of gravity.

A POSITA would have understood that Miller teaches “a retaining mechanism configured to maintain the trim member in the open position against the force of gravity,” as claimed. Ex. 1003 ¶¶ 103–08. Summary section VII(C) above describes the operation of Miller’s retaining mechanism. Miller’s retaining mechanism is configured to maintain its bezel in the open position against the force of gravity because Miller teaches a “feature ... to lock the bezel 6 in a raised position” at about 30–60 degrees above the horizontal, shown in Figures 13–17. Ex. Miller at 5:20–6:30. A POSITA would have understood that this retaining mechanism supports the bezel against gravity because the user must exert a sufficient downward force to lower the

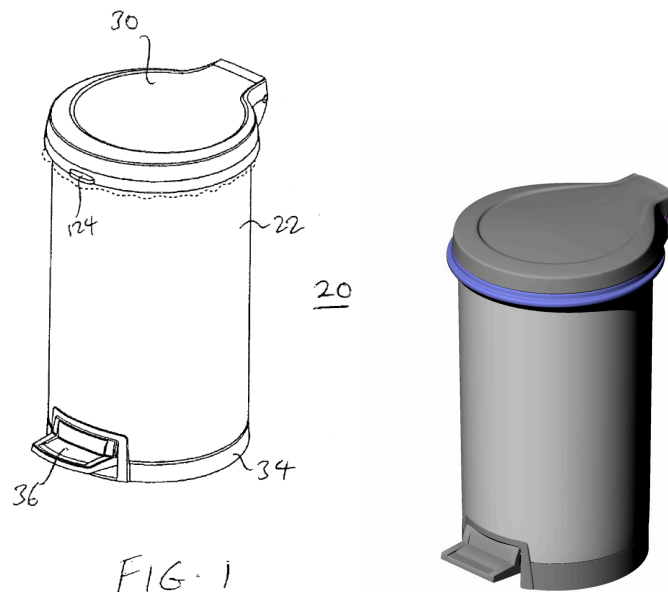
bezel back onto the container rim. Ex Expert ¶ 108; Ex. Miller at 5:60–49, Figs. 14–16 (reproduced below). A POSITA would have understood this feature to be “a retaining mechanism configured to maintain the trim member in the open position against the force of gravity,” as claimed, with Miller’s bezel being the claimed “trim member.” Ex. 1003 ¶ 105.



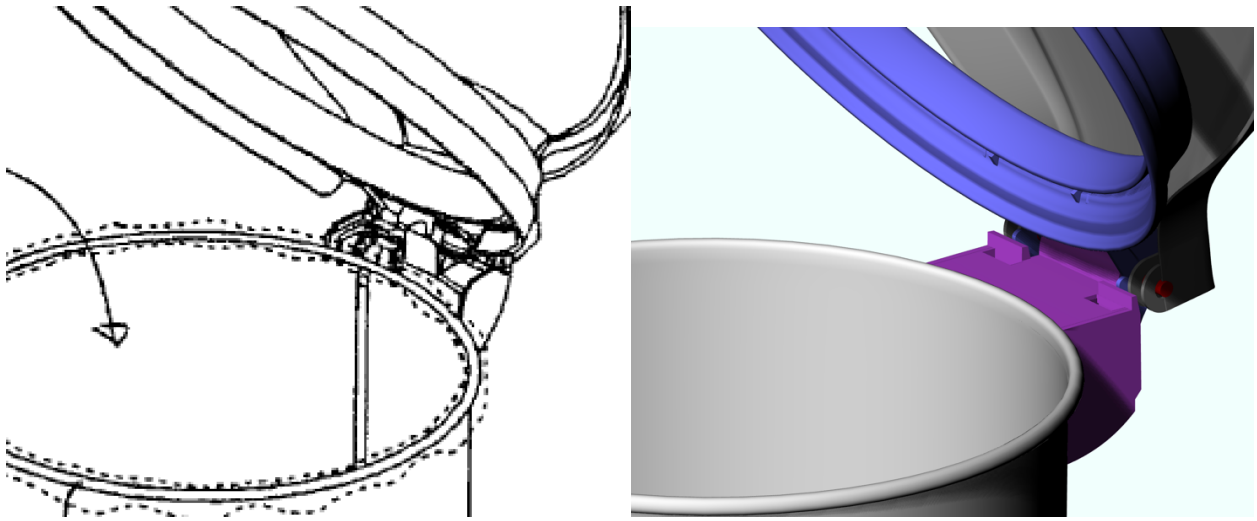


A POSITA would have recognized that Miller's bezel serves the same function as the trim in Yang '865: it secures the trash bag. *Id.* at abstract, 6:18–30; Ex. 1007 at [0045]; Ex. 1003 ¶ 110. Thus, Miller's teaching of how to keep Miller's bezel raised is applicable to the trim in Yang '865.

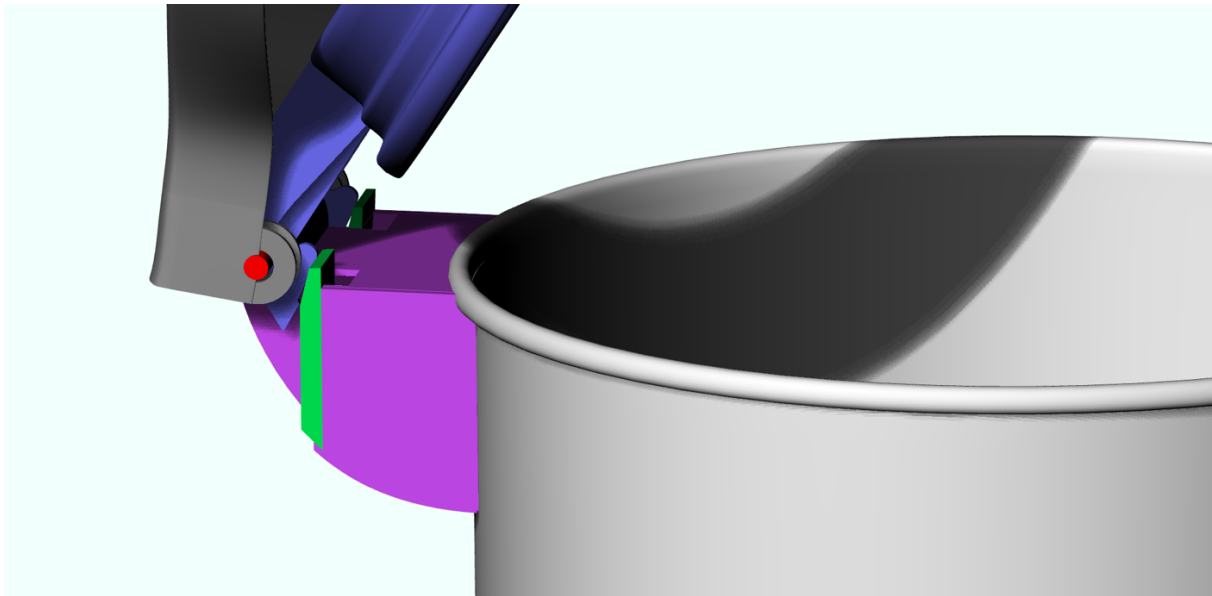
It would have been obvious for a POSITA to modify the Yang '865 trash can to include the retaining mechanism of Miller. Ex. 1003 ¶¶ 103–04, 109–16. The POSITA would have modified the shape of the Yang '865 trim member hinge to have the rounded protruding portion taught by Miller. *Id.* The POSITA would also have made the Yang '865 trash can have a resiliently yieldable, beveled back wall as taught by Miller. *Id.* The POSITA would have had implemented this yieldable, beveled back wall toward the back, near the hinge, as shown in the expert's computer-aided design (CAD) models below:

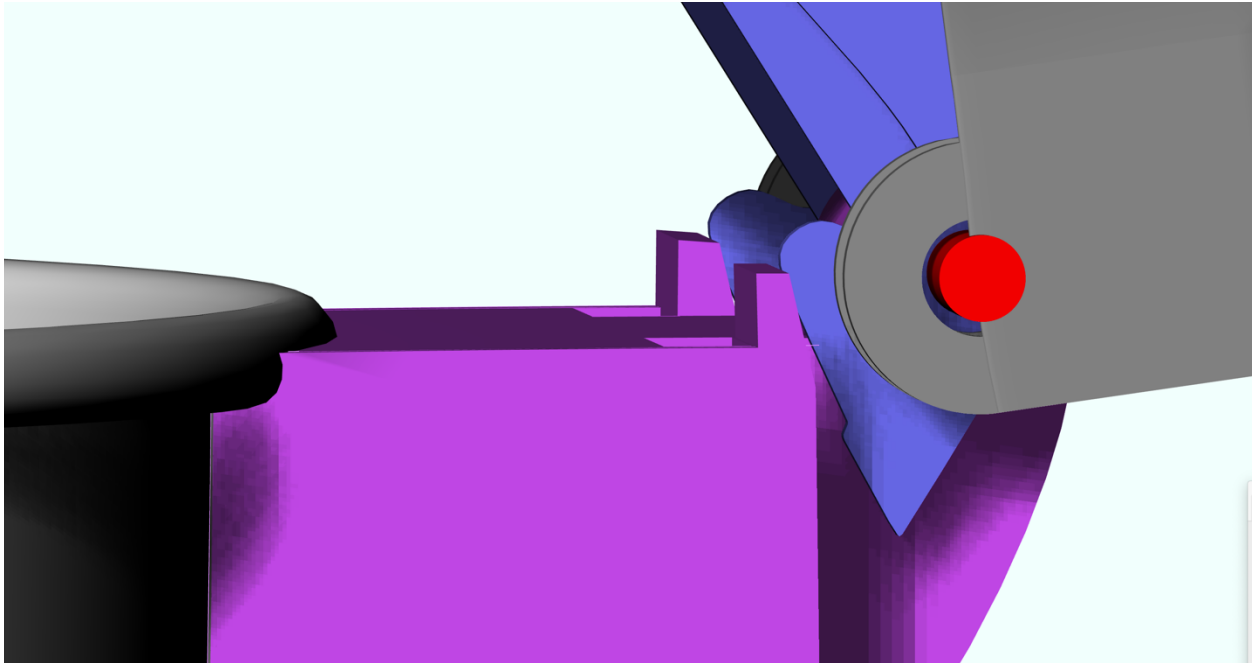


Ex. 1003 ¶ 112 (modeling modified Fig. 1).



Id. ¶ 113 (modeling modified Fig. 2).





Id. ¶¶ 113–14 (showing proposed modification to hinge, with protrusion in blue and resiliently yieldable wall in green). Thus, a POSITA would have found it obvious to modify the Yang ’865 trash can based on Miller to have “a retaining mechanism configured to maintain the trim member in the open position against the force of gravity.”

The POSITA would have expected this modification to work because both Miller’s bevel and Yang ’865’s trim member operate similarly: they are similarly shaped members that pivot up and down using a hinge at one end near the upper backside of a trash can. Ex. 1003 ¶¶ 110–12; Ex. Miller at 5:41–57; Ex. 1007 at [0035], [0038]–[0040]. Both Miller’s bezel and Yang ’865’s trim member are used along with a pivoting lid. Ex. Miller at 3:41–45, 4:46–52; Ex. 1007 at [0035], [0037]. Given the similar setups, a POSITA would expect the mechanics that cause Miller’s

bevel to lock in the open position to similarly work for the similarly shaped trim member of Yang '865 that similarly pivots about a hinge at the upper backside of a trash can. Ex. 1003 ¶¶ 110–12. Moreover, a POSITA would have had an expectation of success because a POSITA would have successfully simulated the model to verify that it works, as Prof. Visser did. Ex. 1003 ¶¶ 112–16.

A POSITA would have made this modification so that the trim “can be locked in a raised, angular position so that the user may use both hands to fit the inner liner.” Ex. 1006 at 1:21–53 (describing problem); 1:61–2:40, 5:20–28, 6:20–22 (describing solution). A POSITA would have found this benefit motivating and applicable because Yang '865 requires the user to “lift the trim” with one hand while replacing the trash bag with the other hand. Ex. 1007 at [0045]; Ex. 1003 ¶¶ 103–04.

For these reasons, this element would have been obvious to a POSITA.

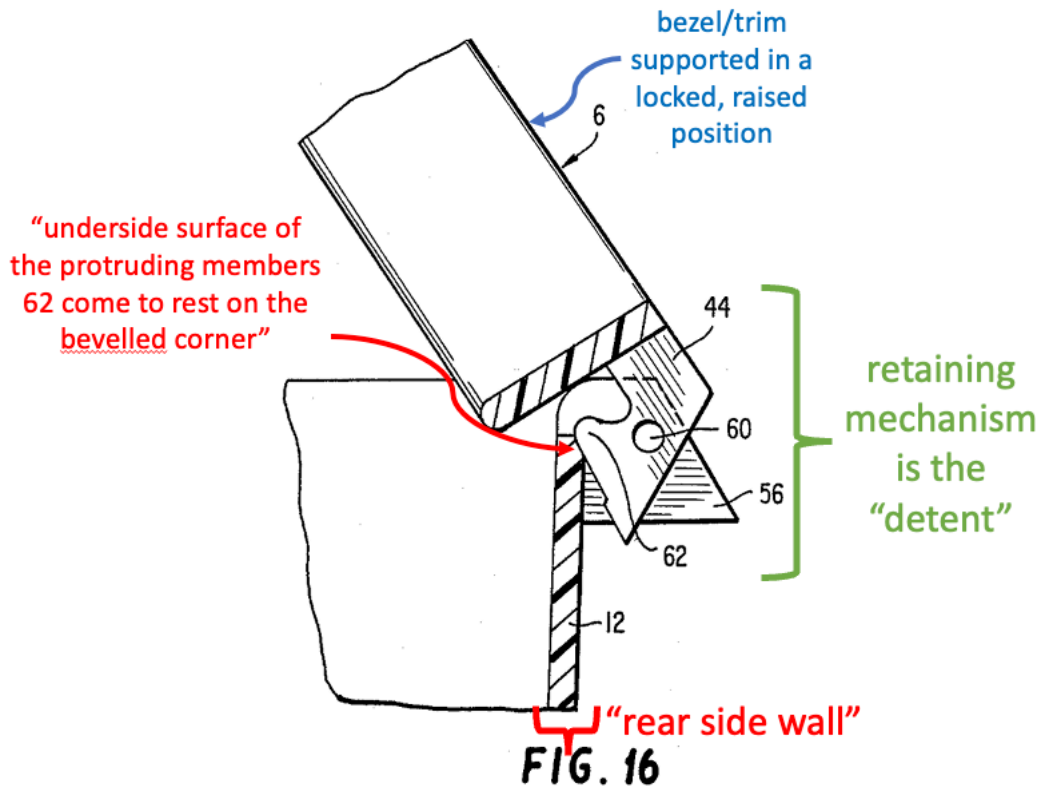
B. Claim 2: *The trash can assembly of claim 1, wherein the retaining mechanism comprises a detent.*

The trash can assembly of claim 1 is obvious as discussed in Section VIII(A). A POSITA would have further understood that, in the proposed combination, “the retaining mechanism comprises a detent,” as claimed. Ex. 1003 ¶¶ 118–19.

The resulting combination includes Miller’s “feature ... to lock the bezel.” Ex.

Miller at 5:20–21. Once locked, the “underside surface of the protruding³ members 62 come to rest on the bevelled corner of the side wall protrusions. In this manner, the bezel 6 is supported in a locked raised position.” *Id.* at 5:55–59. “The user must exert a sufficient downward force on be bezel ... to lower the bezel” to release it. *Id.* at 5:60–68. Thus, a POSITA would have understood these parts of Miller to be a detent under any reasonable construction, including the construction of “a catch that prevents motion until released” because the bezel/trim would be caught on the bevelled corner until released by a user’s downward force. Ex. 1003 ¶¶ 118–19.

³ In litigation, Patent Owner asserts that “a protrusion” labeled “J” infringes this claim. Ex. 1009 at 9, 17, 20, 22.



Ex. Miller at Fig. 16. Thus, claim 2 would have been obvious to a POSITA.

C. Claim 10

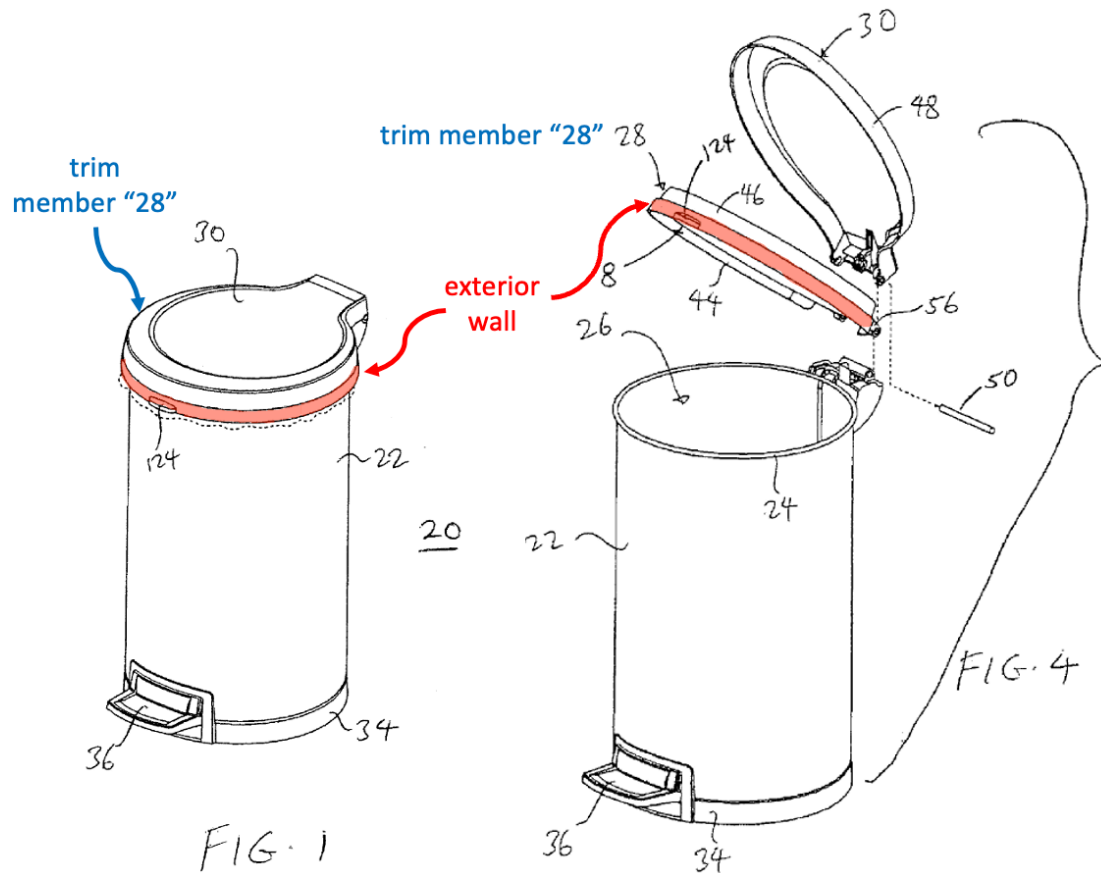
1. [10.Pre] *The trash can assembly of claim 1,*

The trash can assembly of claim 1 is obvious as discussed in Section VIII(A).

2. [10.1] *wherein the trim member further comprises an exterior wall that extends:*

A POSITA would have found this obvious in view of Yang '865 and Miller because the Yang '865 trash can is designed such that "the trim member further comprises an exterior wall that extends" as claimed, and this would not change when modified in view of Miller. Ex. 1003 ¶¶ 120–22. The exterior wall of the trim member

is highlighted in the following figure:



Ex. 1007 at Figs. 1, 4. This exterior wall extends as discussed in the following subsections. Thus, a POSITA would have found this element obvious.

3. [10.2] *generally parallel with a longitudinal axis of the trash can;*

As shown in Figure 1 below, when the lid is closed, the exterior wall extends up and down, “generally parallel with a longitudinal axis of the trash can,” as claimed.

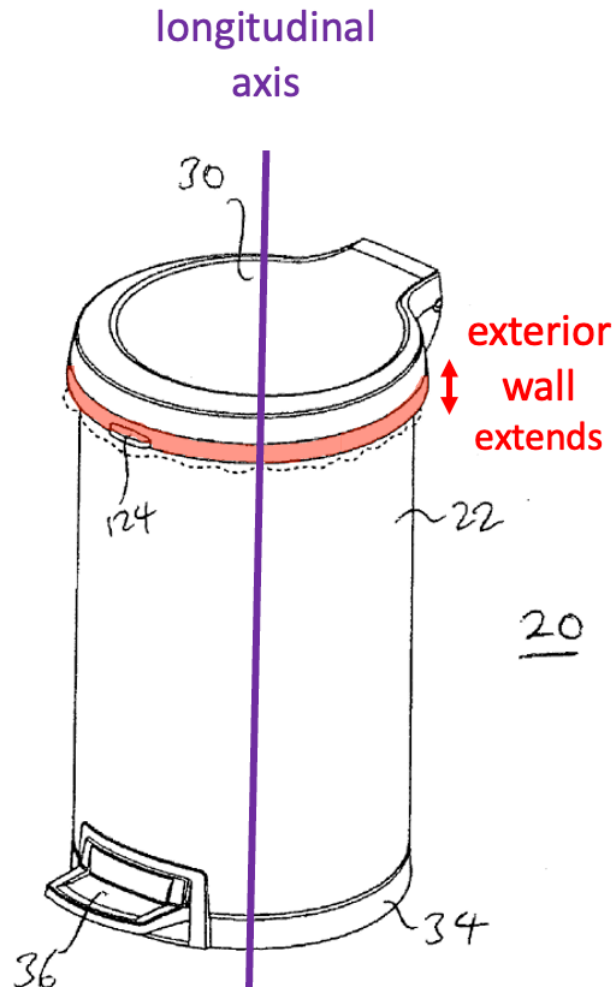


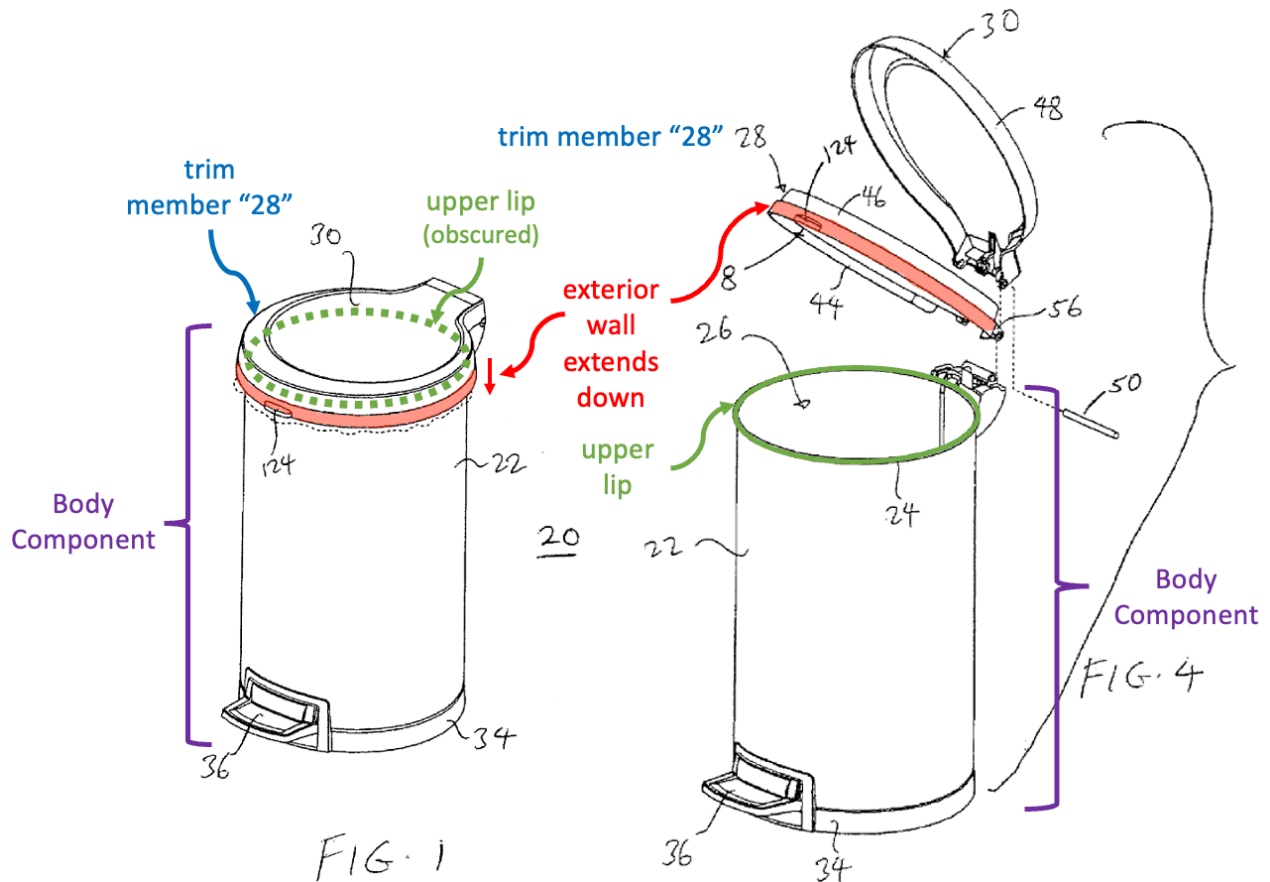
FIG. 1

Ex. 1007 at Fig. 1;⁴ Ex. 1003 ¶ 123. Thus, a POSITA would have found this element obvious.

⁴ Patent Owner's infringement contentions similarly assert that exterior wall "M" is parallel to longitudinal axis "K." Ex. 1009 at 10, 15–16.

4. [10.3] *downward beyond an upper lip of the body component;*
component;

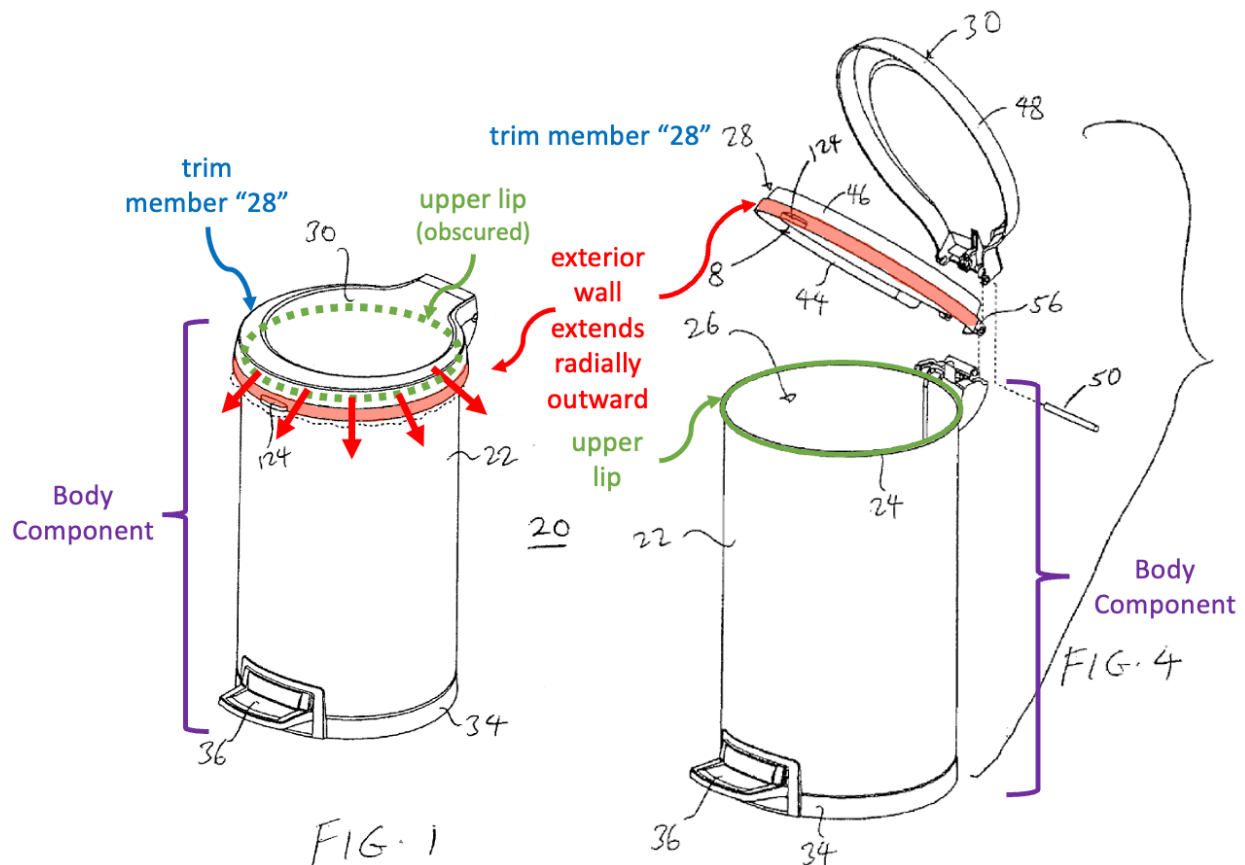
A POSITA would have understood from Figures 1 and 4 of Yang '865 that when the lid is closed, the exterior wall extends “downward beyond an upper lip of the body component,” as claimed. Ex. 1003 ¶ 124–25.



Ex. 1007 at Figs. 1, 4. Because Figure 1 shows that the exterior wall obscures the upper lip that is otherwise visible in Figure 4, the exterior wall extends down past the upper lip to obscure it. *Id.* Thus, a POSITA would have found this element obvious.

5. **[10.4] and radially outward from the upper lip of the body component.**

A POSITA would have understood from Figures 1 and 4 of Yang '865 that the exterior wall extends “radially outward from the upper lip of the body component,” as claimed. Ex. 1003 ¶ 126.



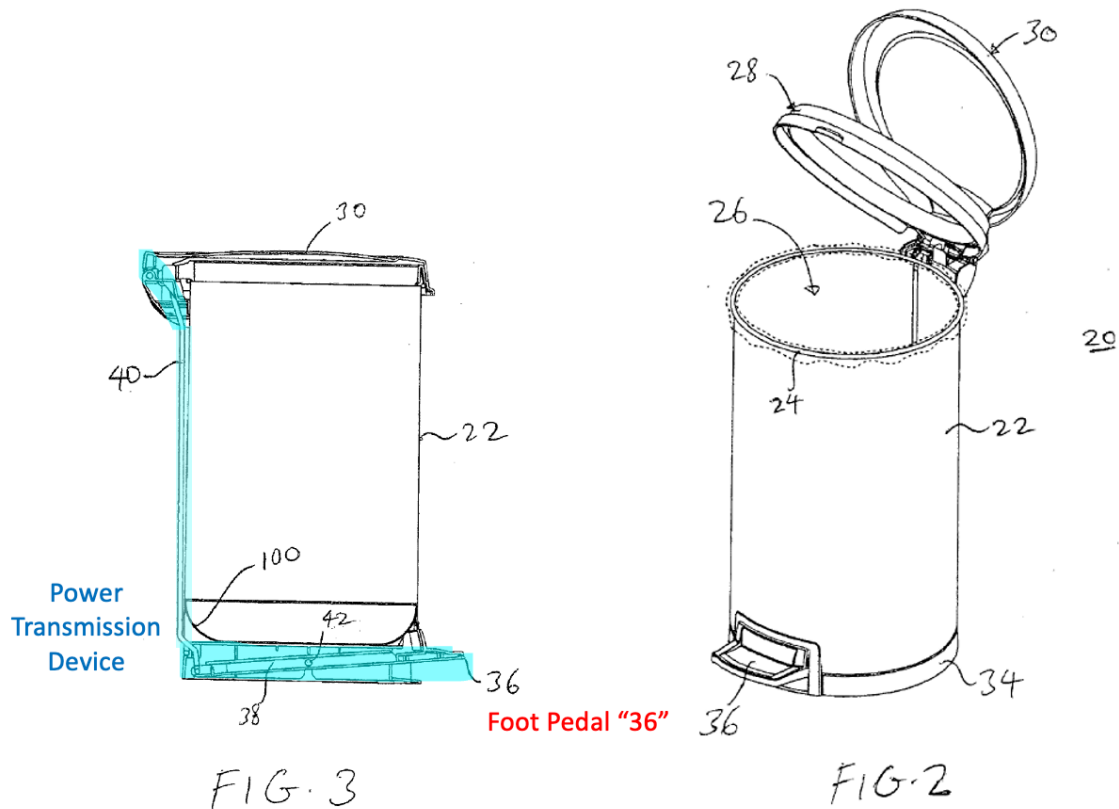
Ex. 1007 at Figs. 1, 4 (annotated, with radially outward arrows exaggerated for clarity). Thus, a POSITA would have found this element obvious.

D. Claim 11: *The trash can assembly of claim 1, wherein the body component has a rectangular shape.*

The trash can assembly of claim 1 is obvious as discussed in Section VIII(A). A POSITA would have further found it obvious that “the body component has a rectangular shape” as recited in claim 11. Ex. 1003 ¶ 128. Although the Figures of Yang ’865 show a circular or oval body, Yang ’865 explicitly describes variations including rectangular bodies. Ex. 1007 at [0034] (“The shell 22 is an enclosing wall which can have any desired shape, including oval, triangular, rectangular, square or circular”). It would have been obvious to vary the shape of the trash can body, including to have a rectangular shape, as taught by Yang ’865 to produce trash cans of a variety of shapes, sizes, and styles that fit in different spaces to suit various consumer needs. Ex. 1003 ¶ 128. Thus, a POSITA would have found this claim obvious.

E. Claim 15: *The trash can assembly of claim 1, wherein the power transmission device comprises a footpedal.*

This element is obvious for the reasons discussed above in preceding Section VIII(A)(8). Yang ’865 discloses, “a link assembly extends from the foot pedal 36 along the base 34 and then upwardly along the shell 22 to the lid 30. The link assembly operates to translate an up-down pivot motion of the pedal 36 to an up-down pivot motion for the lid 30.” *Id.* at [0037].



Thus, a POSITA would have found this claim obvious.

IX. Ground II: Obvious Over Yang '865, Miller, and Yang '532

A. Claim 7

1. [7.Pre] *The trash can assembly of claim 1, wherein:*

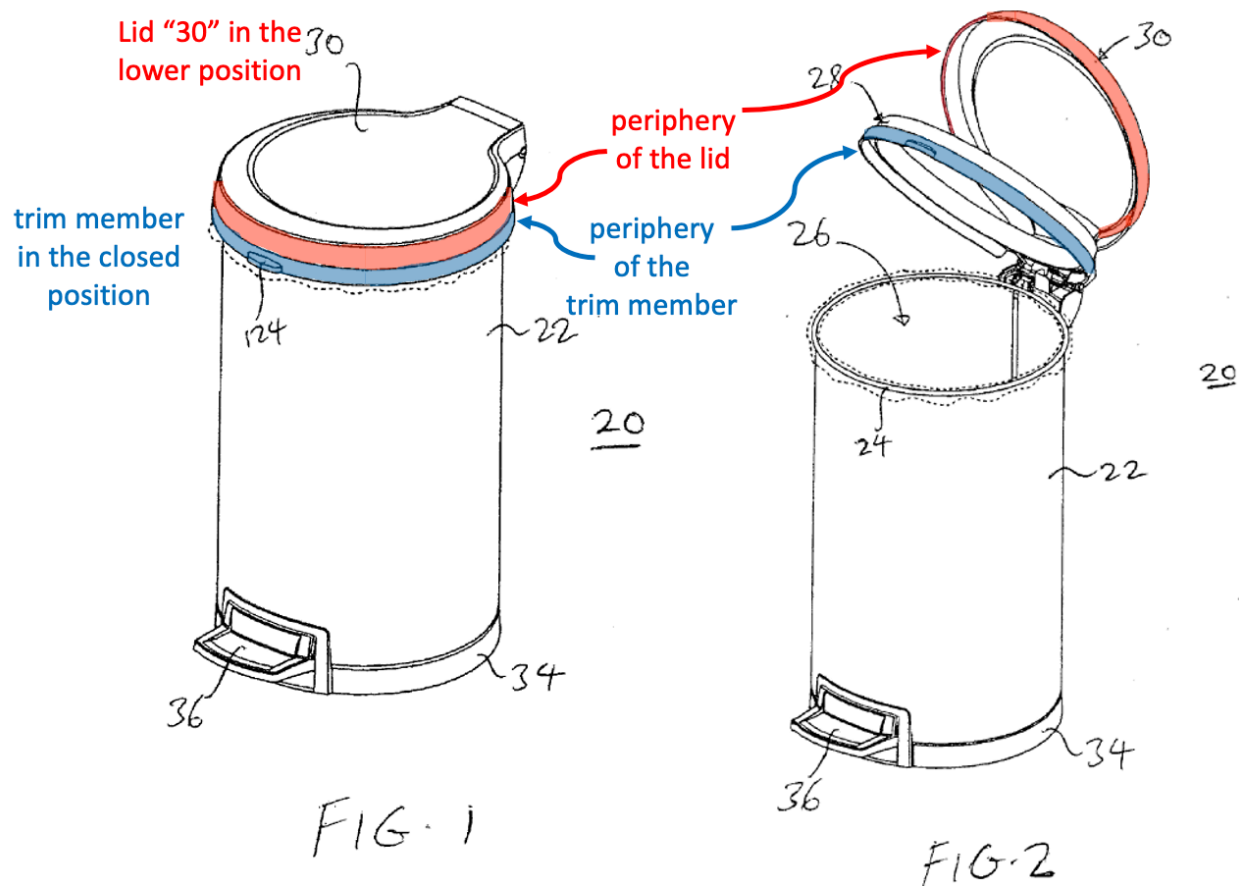
The trash can assembly of claim 1 is obvious as discussed in Section VIII(A).

2. [7.1] *a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position; and*

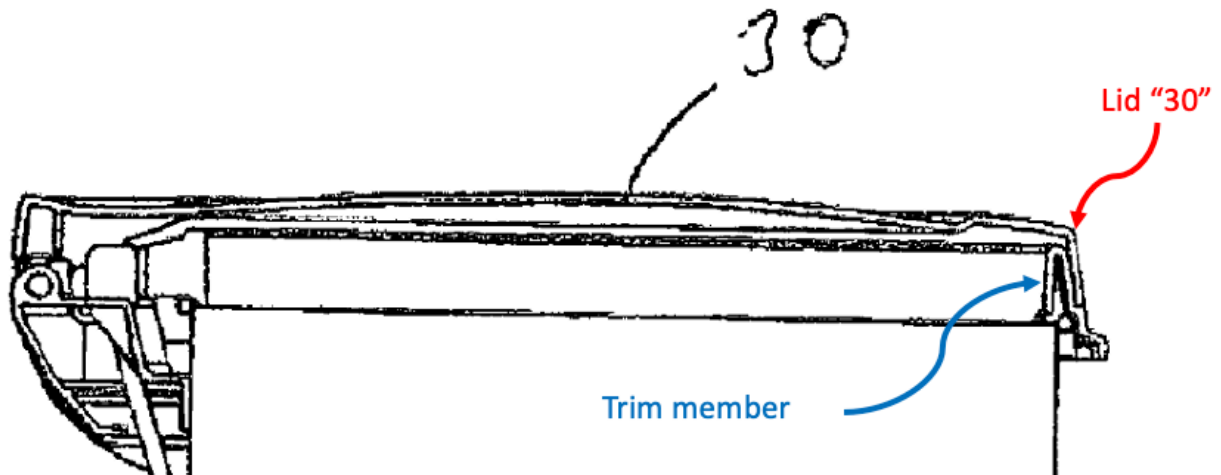
This element describes same the lid-within-a-trim from the same inventor's

earlier publication in 2009. *Compare* Ex. 1008 at Fig. 1, *with* Ex. 1001 at Fig. 1. A POSITA would have found this obvious in view of Yang '865, Miller, and Yang '532.

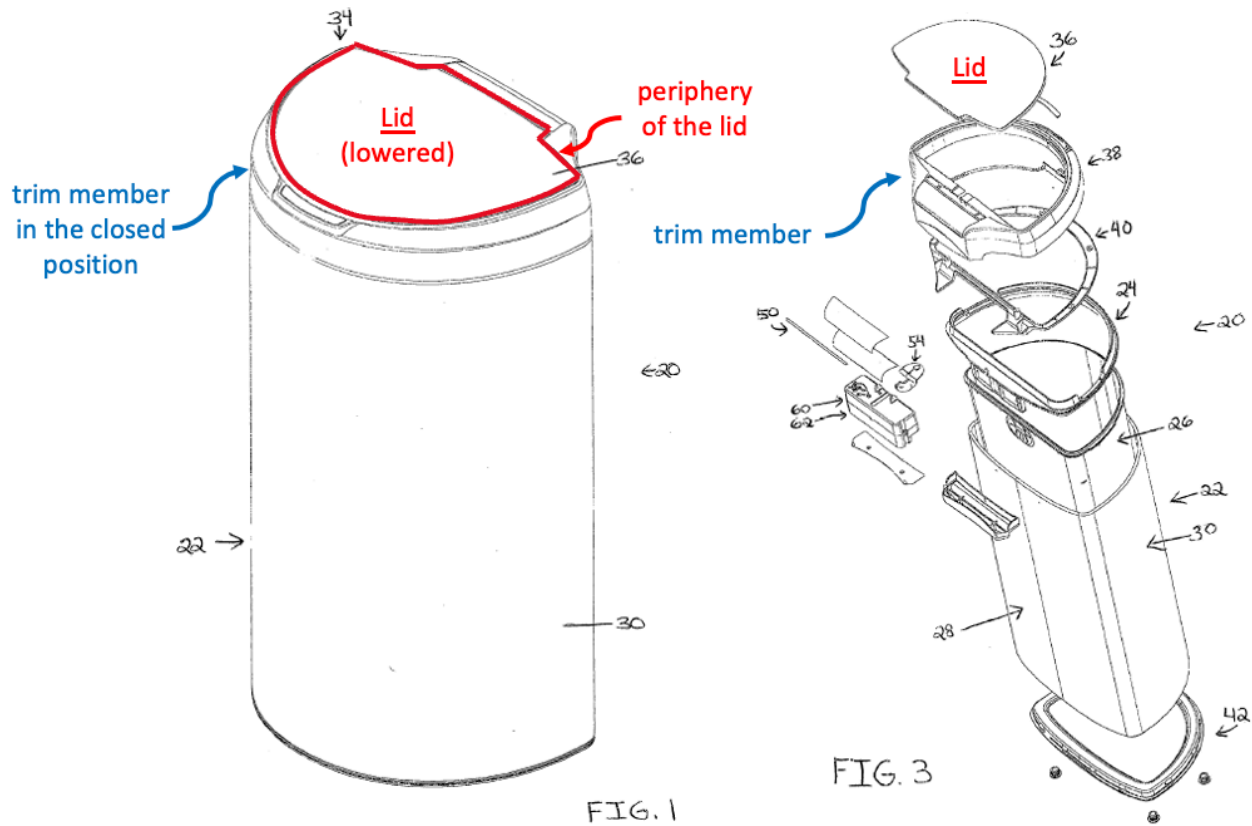
Yang '865 shows that a majority of the periphery of its lid rests on a groove of the trim member (visible in Fig. 2), just within the periphery of the trim member when the trim member and the lid are in the closed/lowered positions:



Ex. 1007 at Figs. 1-2. Figure 3 (cropped and magnified below) shows how the trim has a hump that the lid (red) rests on.



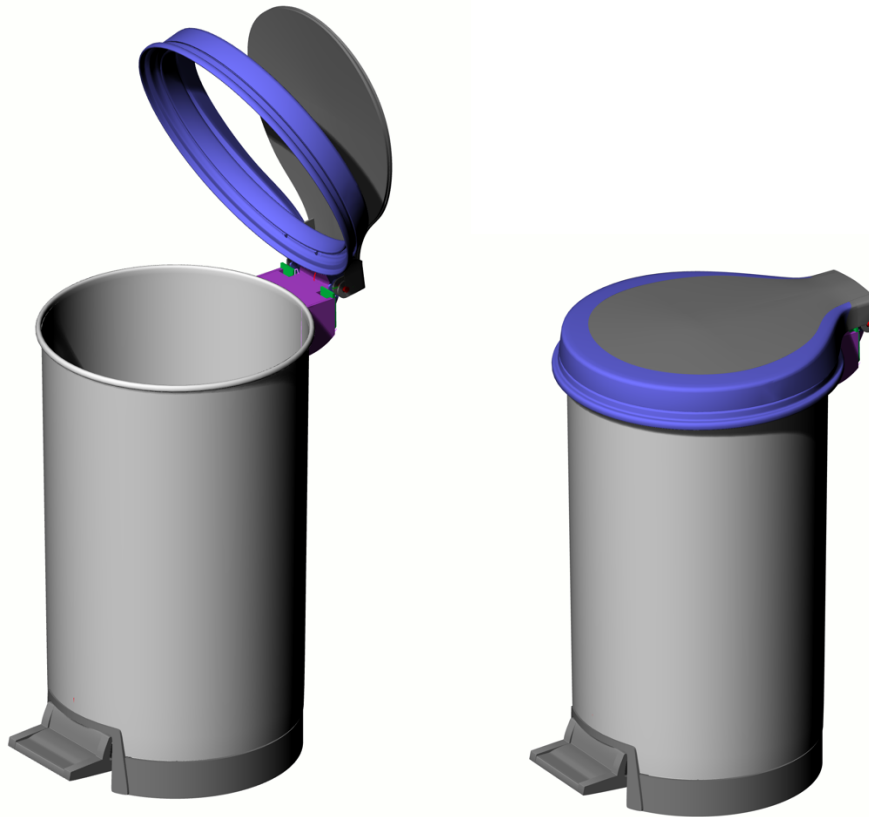
Id. at Fig. 3. If this does not meet the claim element, then it would have been obvious to modify this design of the combination based on the Yang '532 lid and trim design, which looks nearly identical (if not completely identical) to what is illustrated and claimed in the '165 Patent:



Ex. 1007 at Figs. 1, 3. Thus, Yang '532 shows “a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position,” as claimed. The Yang '532 lid closes into a recess in the trim member. *Id.* at Fig. 3.

It would have been obvious for a POSITA to further modify the Yang '865/Miller combined design such that the lid closed within the trim. Ex. 1003 ¶¶ 134–38. Changing the lid so that it appears cleaner when open and is seen closing inside

the trim would have been a simple aesthetic design choice.⁵ The following expert-generated computer model shows how a POSITA would have changed the design of Yang '865 such that the lid (dark grey) closes within the trim:



Ex. 1003 ¶ 138 (showing proposed modification). Instead of closing outside the trim,

⁵ Patent Owner later obtained design patent D672520S1 on this ornamental design. D672520S1 is not relied on for its teaching, but its existence serves as secondary evidence of the desirability of the ornamental design. Ex. 1014

the lid would close inside in a recess on the inside of the trim, as taught by Yang '532. Ex. 1008 at Fig. 3 (showing small recess within trim 38); Ex. 1003 ¶ 137. Thus, it would have been obvious to make the further modification such that “a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position.” Ex. 1003 ¶ 138.

3. [7.2] *a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position.*

A POSITA would have found it obvious to make the modification discussed above for element 7.1. When the lid is opened, “a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position,” as shown below.



Ex. 1003 ¶ 139 (showing trim in purple and lid in dark grey). Thus, a POSITA would have found this element obvious.

B. Claim 13: *The trash can assembly of claim 1, wherein the power transmission device comprises a motor.*

As discussed in Ground I, the trash can assembly of claim 1 would have been obvious in view of Yang '865 and Miller. Yang '865 and Miller do not explicitly teach that “the power transmission device comprises a motor,” as claimed.

Yang '532 teaches a “trash can with power operated lid.” Ex. 1008, title. Yang '532 teaches how “an enclosed receptacle can be provided with a power operated lid

or door with a drive mechanism or motor and gear assembly.” *Id.* at [0011]. The motor and gears are shown in Figure 4. *Id.* at [0027], Fig. 4; *see also id.* at [0042] *et seq.* (describing how the motor, gear assembly, battery, sensors, control algorithm, and other components work together to automatically open and close the lid).

A POSITA would have found it obvious to replace the foot-powered transmission device of Yang ’865 with a motor, gear assembly, battery, sensors, control algorithm, and other components as described in Yang ’532. Ex. 1008 at [0042] *et seq.*; Ex. 1003 ¶¶ 141–43. This would allow for automating the opening and closing of the lid based sensing on nearby movement. Ex. 1008 at [0005], [0042]. A POSITA would have recognized that Yang ’865 and Yang ’532 are merely foot power and motorized variations of the same basic design of a trash can that has a lid and trim. Ex. 1003 ¶¶ 141–43. Both foot-powered and motorized, battery-powered variations of power transmission devices of trash cans were commercially available. Ex. 1007 at [0005]–[0006]; Ex. 1008 at [0005]. A POSITA would have been motivated to make motorized, battery-powered variations of trash cans as was the commercial norm to appeal to consumers desiring trash cans with automated lids because automated lids require less manual labor. Ex. 1008 at [0005]; Ex. 1003 ¶ 143. Thus, this claim would have been obvious to a POSITA.

X. Ground III: Obvious Over Koda and Miller**A. Claim 1**

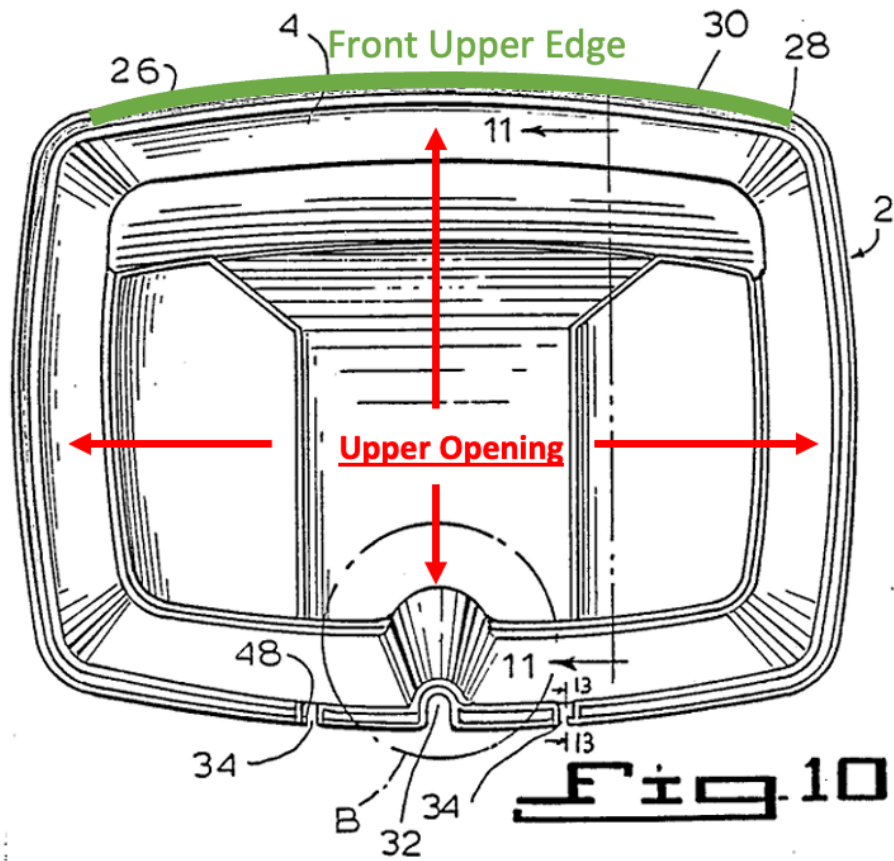
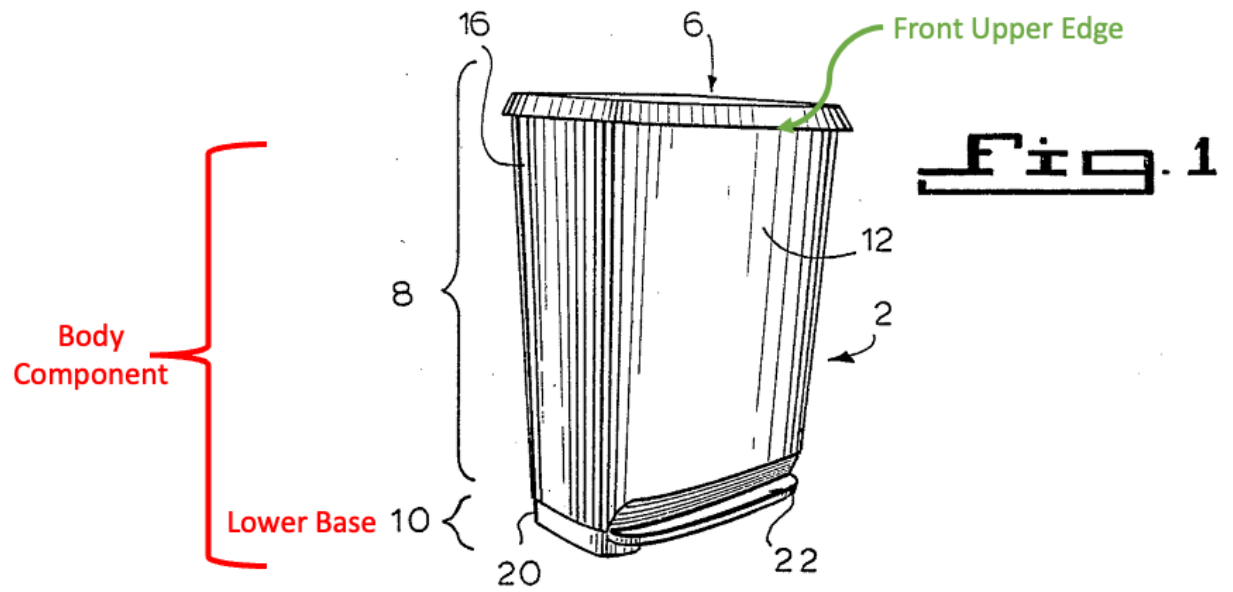
Claim 1 is obvious under 35 U.S.C. § 103 over Koda in view of Miller because a POSITA would have looked to Miller to understand Koda's retainer ring. A POSITA would have done so because Koda explicitly refers the reader to Miller for its bezel with a "similar construction" to Koda's retainer ring. Ex. Koda at 8:17–24. Thus, a POSITA would have understood that Koda's retainer ring to have the hinge and locking mechanism described in Miller and would have implemented Koda's retainer ring according to the disclosure of Miller.

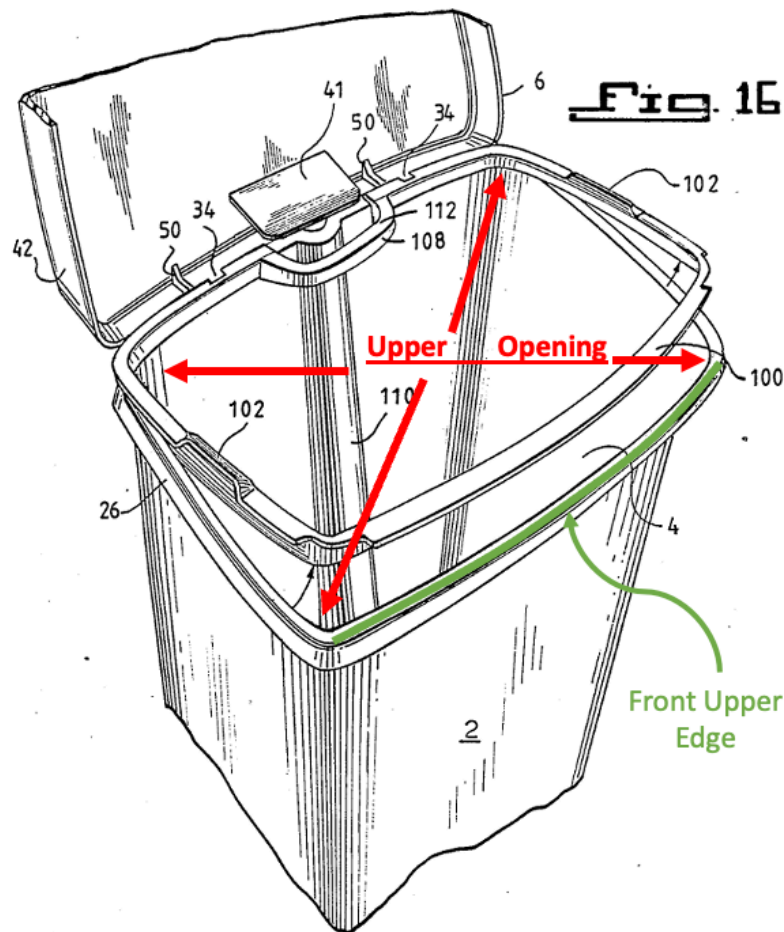
1. [1.Pre] *A trash can assembly comprising:*

If the preamble is limiting, Koda teaches a trash can assembly. Ex. 1003 ¶ 147. Koda is titled "Wastebasket having lid hinge and actuating mechanism protector." Ex. 1005. This wastebasket is shown and described with respect to Koda's Figures 1–18.

2. [1.1] *a body component comprising a lower base, an upper opening, and a front upper edge; and*

Koda's wastebasket features "a body component comprising a lower base, an upper opening, and a front upper edge," as claimed. Ex. 1003 ¶¶ 148–50. These figures show each part:



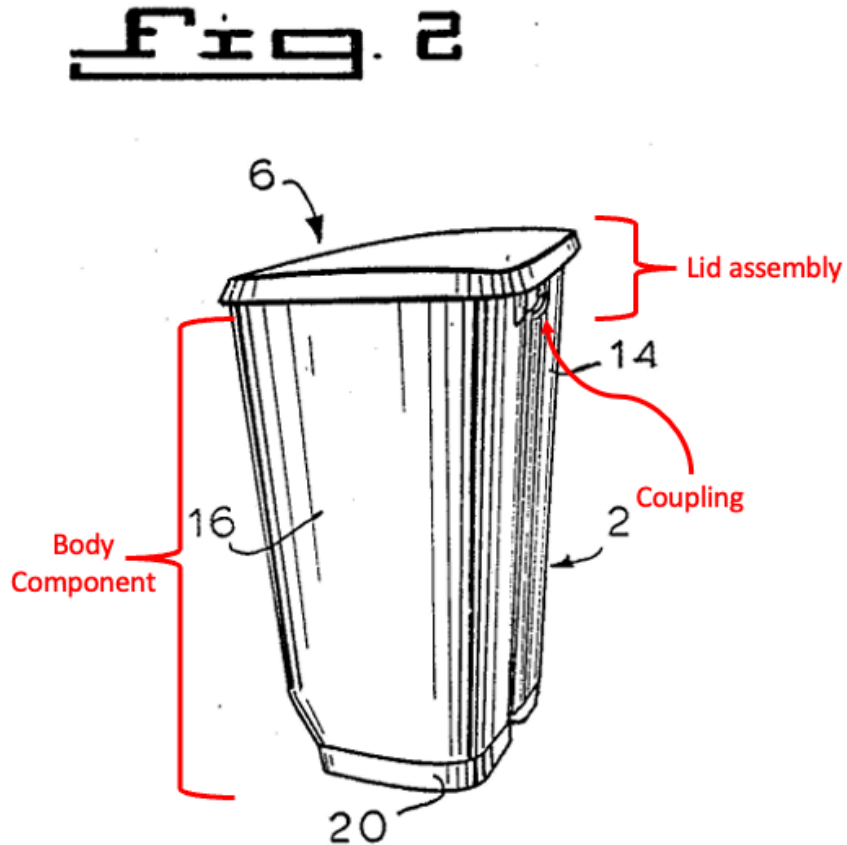


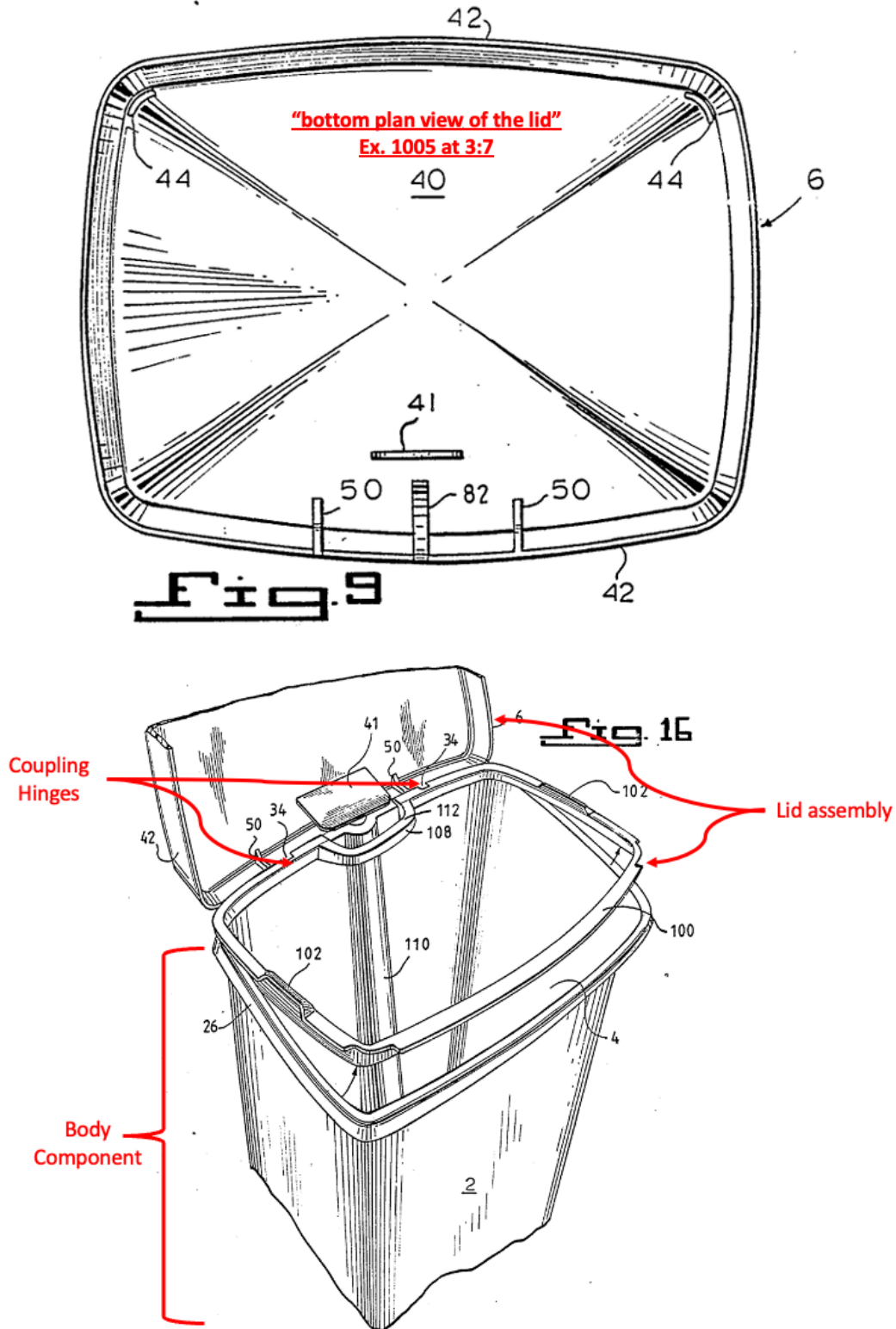
Ex. 1005 at Figs. 1, 10 (top down view), 16; *see also id.* at 3:30–4:8, 5:2–7:69 (describing details). The “lower section 10” of Koda is the claimed “lower base.” *Id.* at 3:48–52. Koda’s container “rim 26” at “open end 4” defines the claimed “upper opening” of the body, the front part of which is the claimed “front upper edge.” *Id.* at 3:30–38, 3:53–65, 4:16–22; Ex. 1003 ¶¶ 148–50.

Thus, this element would have been obvious in view of Koda and Miller, if not anticipated by Koda.

3. [1.2] *a lid assembly configured to couple with the body component, the lid assembly comprising:*

Koda's wastebasket features a lid assembly configured to couple with the body component. Ex. 1003 ¶¶ 151–54. The following annotated figures show each part:





Ex. 1005 at Figs. 2, 9, 16; *see also id.* at 3:30–5:2 (describing details). A POSITA

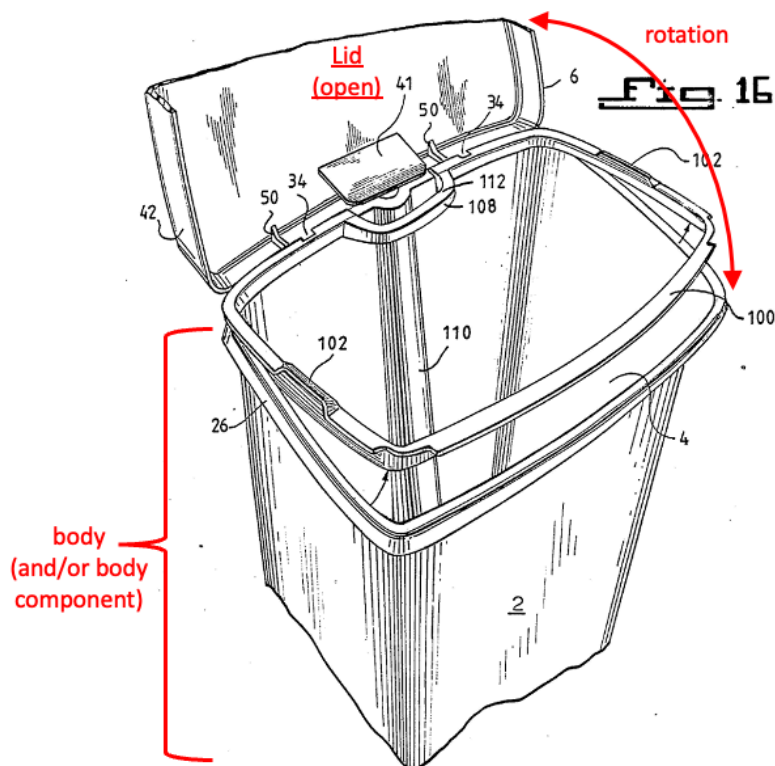
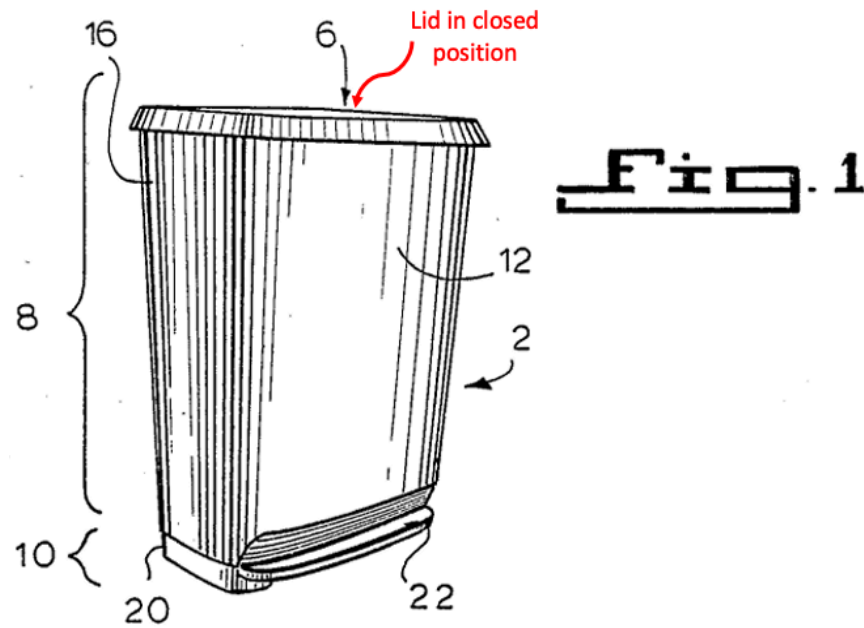
would have understood that Koda’s “lid 6” (e.g., as shown in Fig. 9) and retainer ring 100 meet the claimed “lid assembly.” Ex. 1003 ¶ 153. The lid assembly is shown as coupled being “seated closely on the container rim 26” when the lid is closed. Ex. 1005 at 4:64–66, Figs. 1, 2, 16. Koda’s lid assembly is further coupled to the body because “the lid 6 is mounted on the container” by way of ribs 46, hinge elements 50, and pins 48. *Id.* at 3:30–38, 4:30–66. Koda’s retainer ring 100 is likewise coupled to the body because it is “pivotally mounted to the container 2” via hinge elements 104 and also rests on the body when in the closed position. *Id.* at 8:25–49; Ex. 1006 at 2:10–24, 3:47–55; Ex. 1003 ¶ 154. The POSITA’s understanding that Koda’s retainer ring rests on the body when closed would have been informed by Miller, which a POSITA would have to further details the retainer ring of Koda because Koda explicitly refers the reader to Miller for its “similar construction” and details. Ex. 1005 at 8:17–24; Ex. 1003 ¶ 154.

Thus, this element would have been obvious in view of Koda and Miller, if not anticipated by Koda.

4. [1.3] *a lid configured to rotate, relative to the body
[component], between a lower position and an upper
position; and*

The lid assembly of Koda’s wastebasket includes a lid configured to rotate, relative to the body (or the previously recited body *component*), between a lower

position and an upper position. Ex. 1003 ¶¶ 155–56. The following annotated figures show each part:



Ex. 1005 at Figs. 1, 16; *see also id.* at 4:30–5:8 (generally describing lid and body),

6:58–7:26 (describing mechanism behind rotation), 8:1–11 (describing purpose of open position), 8:38–39, Figs. 15a–15c (showing mechanism behind lid opening and closing). Figure 1 shows the lid in a closed position (the claimed “lower position”), and it rotates relative to the body to reach the open position (the claimed “upper position”) shown in Figure 16. Koda’s “lid 6 is mounted on the container 2 and is pivotable between a closed position, covering the container’s open end 4, and an open position, where it is in a substantially upright, vertical disposition.” *Id.* at 4:30–34. The lid pivots about lid mounting pins to reach the vertical position. *Id.* at 7:1–8. Thus, a POSITA would have understood this description of the pivoting of Koda’s lid relative to the container to mean that the lid rotates relative to the body, and that in the substantially upright, vertical disposition is the claimed “upper position.” Ex. 1003 ¶ 156.

Thus, this element would have been obvious in view of Koda, if not anticipated by Koda.

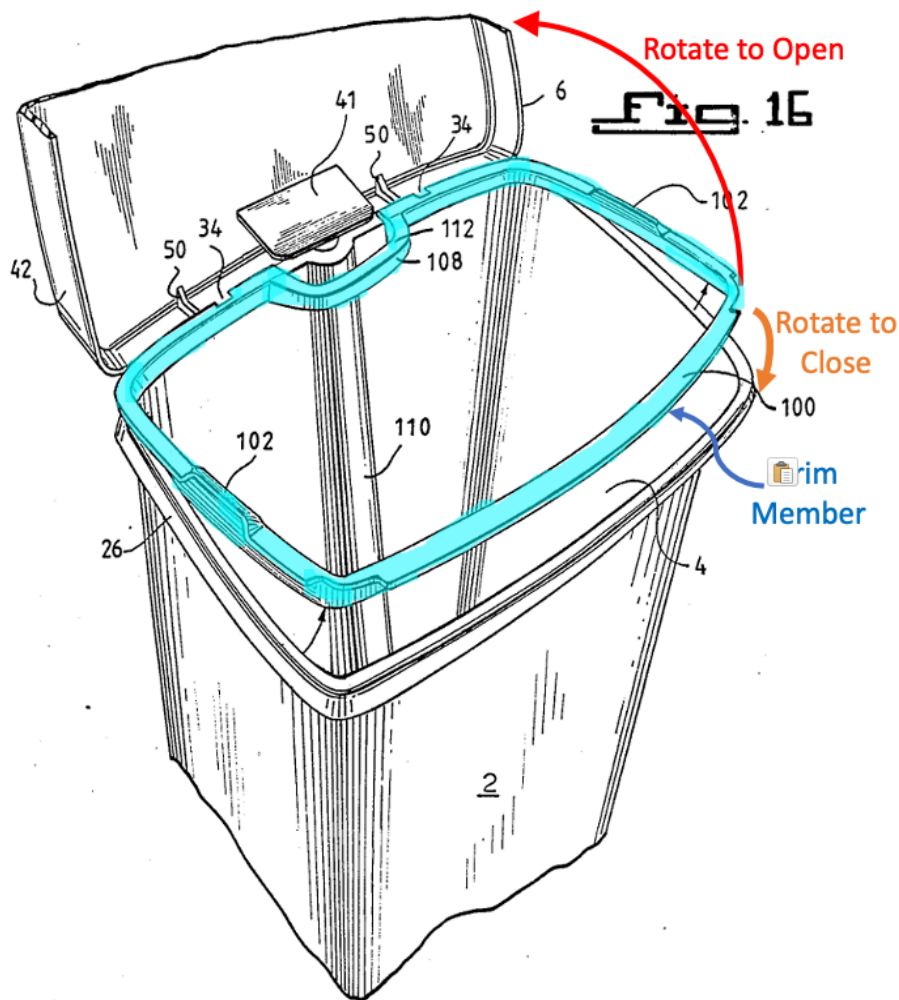
5. [1.4] *a trim member configured to rotate between a closed position and an open position, wherein:*

A POSITA would have understood that this was met by Koda in two ways. Both of these apply Patent Owner’s proposed plain and ordinary meaning of “an externally visible ornamentation member.” *See* Section III, above. Notably, Patent Owner does not contend that a trim be separate from a lid, nor does Patent Owner

contend that the lid must be in a certain position when viewing the trim. *Id.*

a. Retaining Ring Interpretation

Under a first interpretation, a POSITA would have understood that Koda's retaining ring 100 is a trim member configured to rotate between a closed position and an open position. Ex. 1003 ¶¶ 163–65. The following annotated figure shows how Koda's retaining ring is an externally visible ornamentation member when the lid is open:



Ex. 1005 at Fig. 16; *see also id.* at 2:45–49 (describing pivoting retainer ring), 8:17–

49 (describing details of “retainer ring 100”); Ex. 1006, *passim* (providing further details about “bezel 6”). Koda’s retainer ring 100 rotates between open and closed positions because it “is pivotably mounted to the container 2” via “a pair of hinge elements 104 for securing it to the rim of the container.” Ex. 1005 at 2:45–49, 8:25–30. This understanding about Koda’s retainer ring would have been informed by Miller’s description of its bezel 6, which is the similarly corresponding component from Figure 2 of Miller. Ex. 1003 ¶ 165. Miller explains that its bezel is “pivotally mounted on the container 2 at the container’s open end. The bezel 6 is pivotable between an open position, where at least a portion of the bezel is raised above the rim 14 of the container, and a closed position, where the bezel 6 is disposed substantially co-planarly with the upper rim 14 of the container.” Ex. 1006 at 3:49–55. A POSITA would have understood that Koda’s retainer ring operates the same way in terms of pivoting (rotating) between open and closed positions. Ex. 1003 ¶ 165.

Thus, this element would have been obvious in view of Koda and Miller under this first interpretation.

b. Lid Rim Interpretation

Under an alternative, second interpretation, a POSITA would have understood that the claimed “trim member configured to rotate between a closed position and an open position” is met by Koda’s lid rim 42. The following annotated figures show how this lid rim is an externally visible ornamentation member:

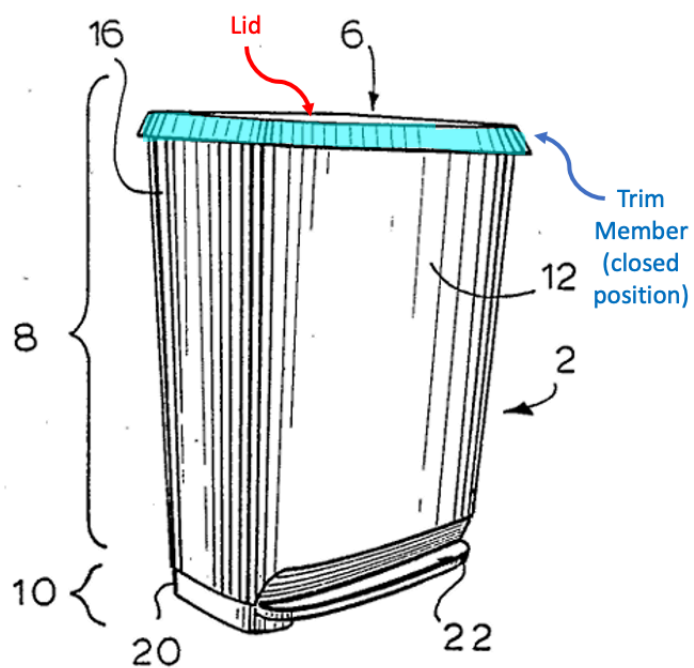
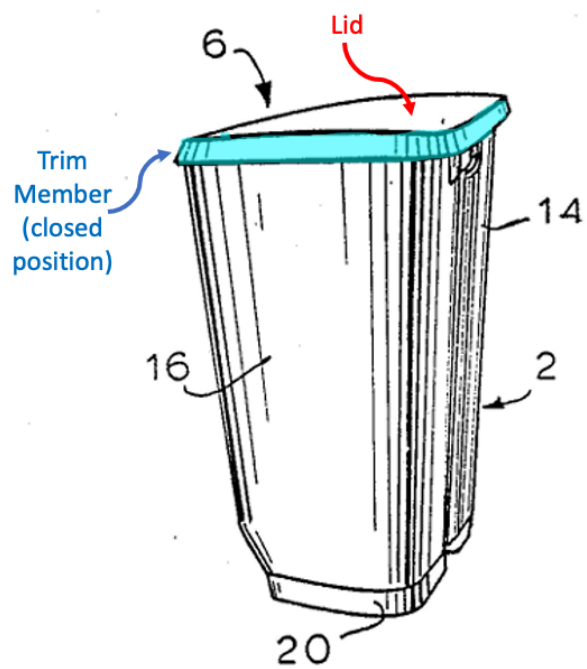
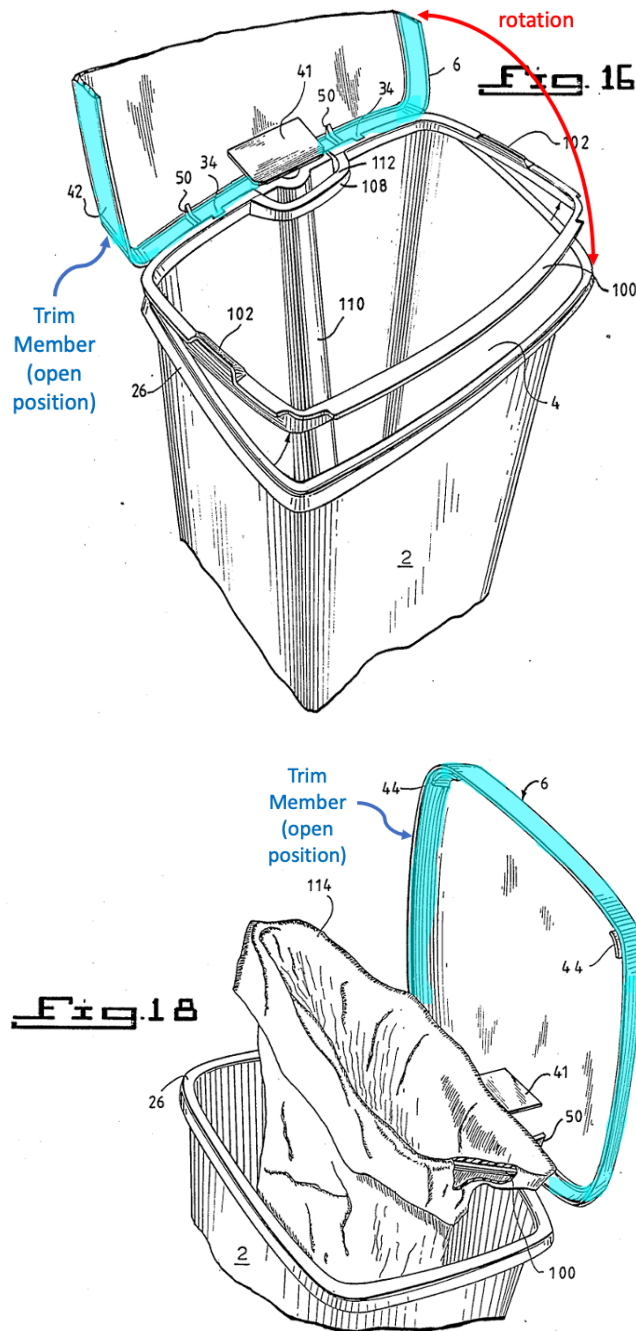


Fig. 2





Ex. 1005 at Figs. 1, 2, 16, 18; *see also id.* at 4:9–5:2 (describing the rim in 42 more detail); Ex. 1003 ¶¶ 166–67. Koda’s rim 42 rotates between open and closed positions because it moves with the lid, which rotates between an open/upper position and a lower/closed position as discussed above for element [1.3].

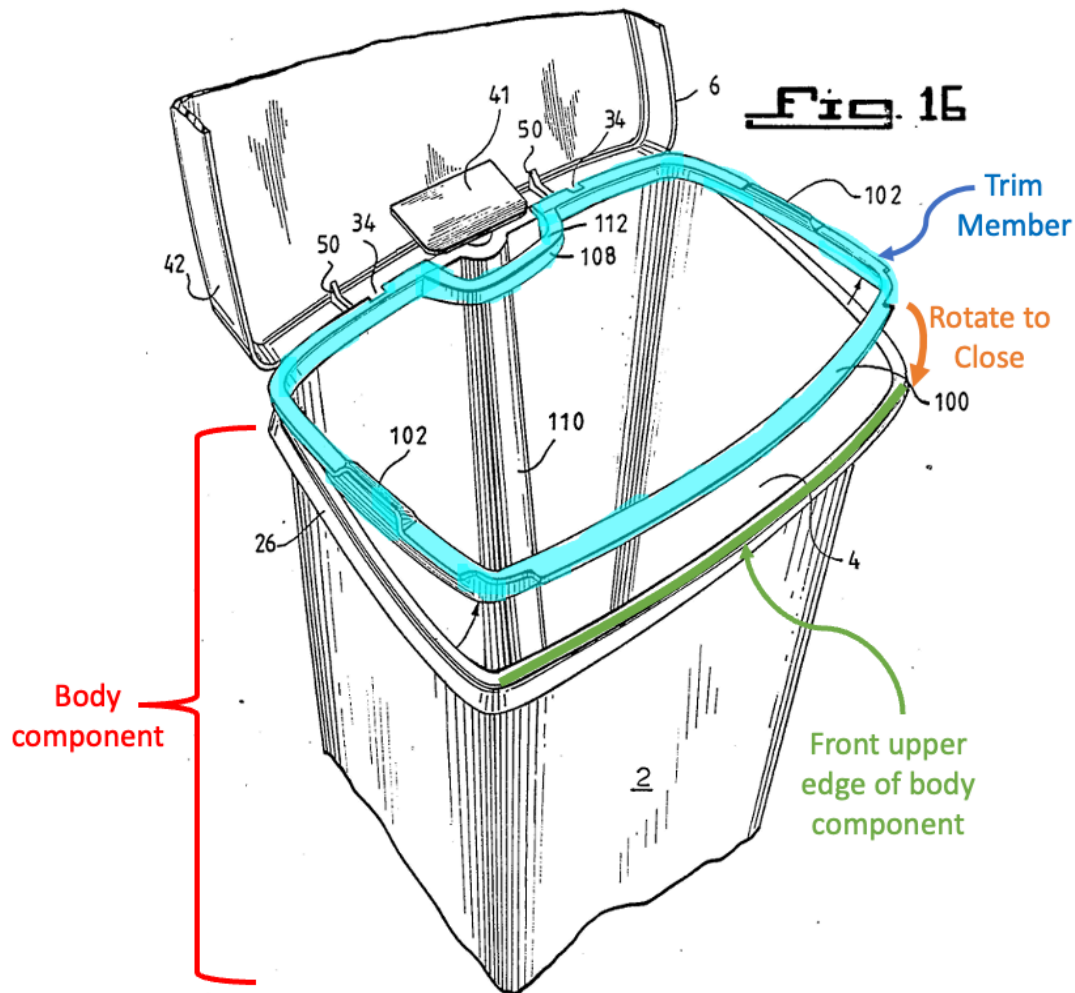
Thus, this element would have been obvious in view of Koda under this second interpretation.

6. [1.5] *in the closed position, a front of the trim member is adjacent the front upper edge of the body component; and*

A POSITA would have understood that this was met by Koda in two ways.

a. Retaining Ring Interpretation

Under the first interpretation (that Koda's retaining ring 100 is a trim member), a POSITA would have understood that when the retaining ring closes, the front of the retaining ring 100 is adjacent the front upper edge of the body component. Ex. 1003 ¶¶ 168–70. The following annotated figure shows how this would happen:



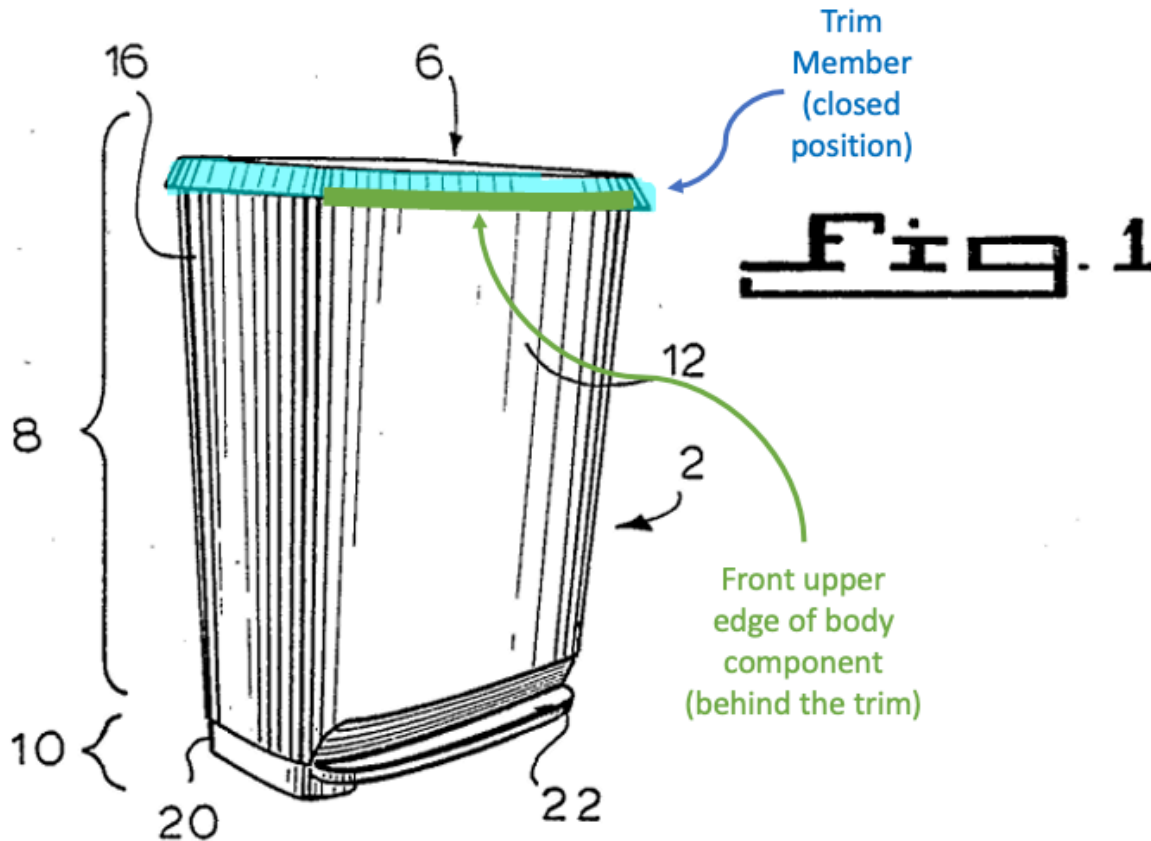
Ex. 1005 at Fig. 16; *see also id.* at 2:45–49 (describing pivoting retainer ring), 8:17–49 (describing details of “retainer ring 100”); Ex. 1006, *passim* (providing further details about “bezel 6”). Koda’s retainer ring 100 “is pivotably mounted to the container 2,” so when it closes, the front would rotate downward until it is adjacent to and rests on the front upper edge of the body component. Ex. 1005 at 2:45–49, 8:25–30. This understanding about the closed position of Koda’s retainer ring would have been informed by Miller’s description of its bezel 6, which is the similarly corresponding component of Koda’s retainer ring. Ex. 1003 ¶¶ 170. Miller explains

that its bezel is “pivotally mounted on the container 2 at the container’s open end. The bezel 6 is pivotable between an open position ... a closed position, where the bezel 6 is disposed substantially co-planarly with the upper rim 14 of the container.” Ex. 1006 at 3:49–55. Moreover, the bezel “includes a horizontal, flat seat portion 24 which is adapted to rest on the container rim 14 when the bezel is in the closed position.” *Id.* at 3:58–60; *see also id.* at 3:65–4:21. A POSITA would have understood that Koda’s retainer ring operates the same way in terms of pivoting (rotating) to rest on (adjacent to) the container rim (front upper edge) when in the closed position because Koda’s retainer ring corresponds to Miller’s bezel. Ex. 1003 ¶ 170.

Thus, this element would have been obvious in view of Koda and Miller under this first interpretation.

b. Lim Rim Interpretation

Under the alternative interpretation (that Koda’s lid rim is the “trim member”), a POSITA would have understood that “in the closed position, a front of the trim member is adjacent the front upper edge of the body component” is met by Koda, as shown in the following annotated figures:



Ex. 1005 at Fig. 1. Koda explains that the “lid rim 42 substantially parallels the edge portion 30 of the container rim and extends to or slightly below the edge of the container rim 26 so that it can mount closely on the container and hide the container rim from view when the lid is in the closed position.” *Id.* at 4:9–22. Based on this description, a POSITA would have understood that, when closed, the front of Koda’s lid rim 42 (front of the trim member) extends to the front edge of the container rim 26 (front upper edge of the body component) such that they are adjacent, as claimed. Ex. 1003 ¶¶ 171–72.

Thus, this element would have been obvious in view of Koda under this

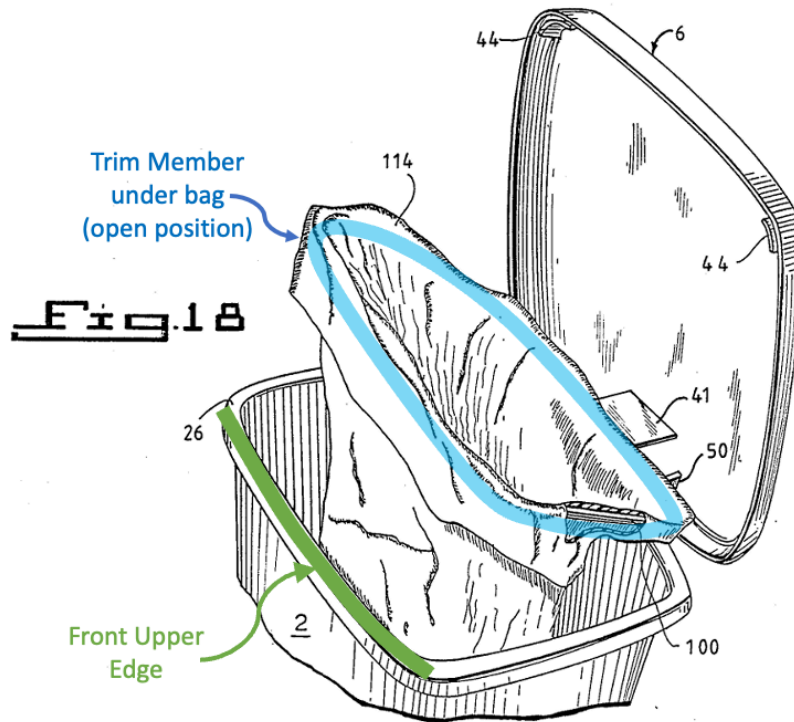
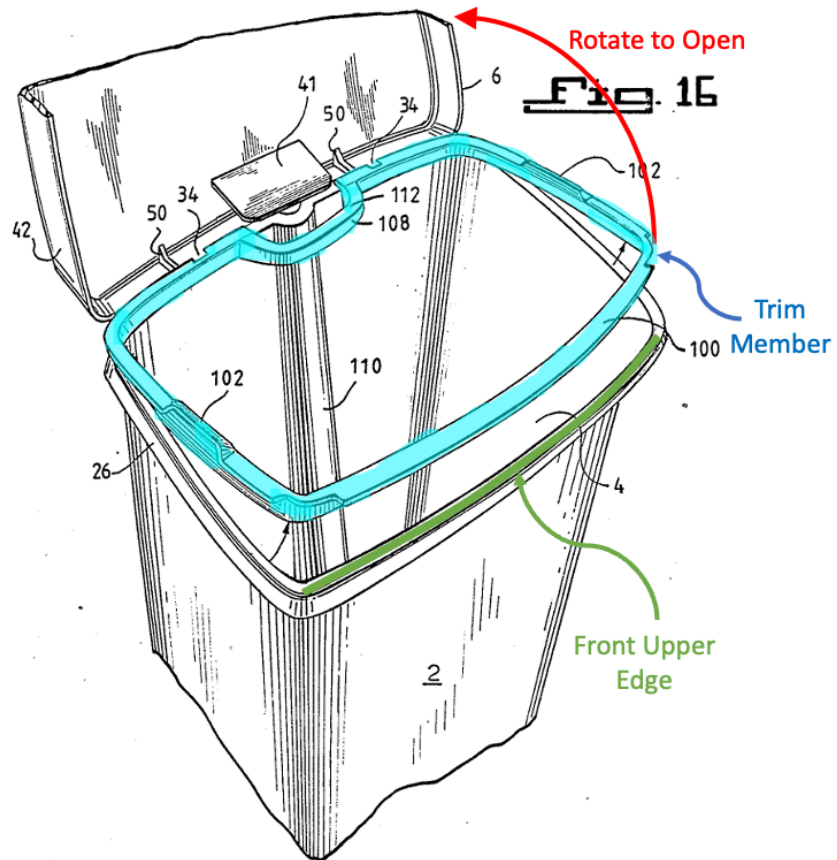
alternative interpretation, if not anticipated.

7. [1.6] *in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component; and*

A POSITA would have understood that this was met by Koda in two ways.

a. Retaining Ring Interpretation

Under the first interpretation (that Koda's retaining ring 100 is a trim member), a POSITA would have understood that when the retaining ring is in the open position, the front of the retaining ring 100 would be apart from and vertically higher than the front upper edge of the body component. Ex. 1003 ¶¶ 173–75. The following annotated figures shows how this would happen:



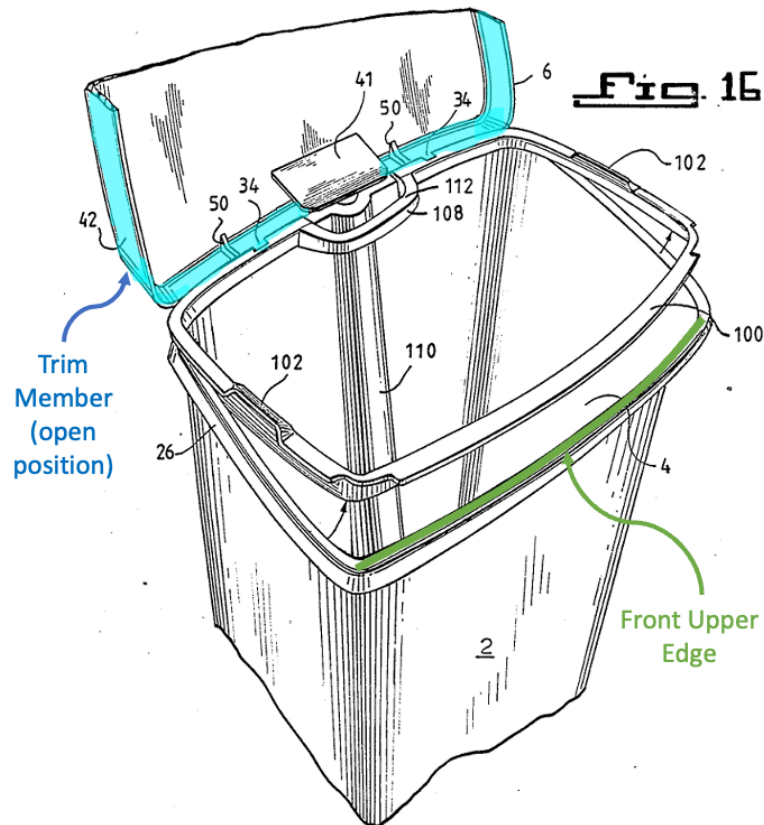
Ex. 1005 at Figs. 16, 18; *see also id.* at 2:45–49 (describing pivoting retainer ring), 8:17–49 (describing details of “retainer ring 100”); Ex. 1006, *passim* (incorporated by reference and providing further details about “bezel 6”). Koda’s retainer ring 100 “is pivotably mounted to the container 2,” so when it opens, the front would rotate upward until it is apart from vertically higher than the front upper edge of the body component. Ex. 1005 at 2:45–49. This understanding about the closed position of Koda’s retainer ring would have been informed by Miller’s description of its bezel 6, which is the similarly corresponding component of Koda’s retainer ring. Ex. 1003 ¶ 175. Miller explains that its bezel is “pivotally mounted on the container 2 at the container’s open end. The bezel 6 is pivotable between an open position where at least a portion of the bezel is raised above the rim 14 of the container.” Ex. 1006 at 3:49–55; *see also id.* at 5:21–29 (describing locked open angle at 30–60 degrees above the horizontal). A POSITA would have understood that Koda’s retainer ring operates the same way in terms of pivoting (rotating) upward so that the front is raised above (space apart from and vertically higher than) the container rim (front upper edge) when in the open position because Koda’s retainer ring corresponds to Miller’s bezel. Ex. 1003 ¶ 175.

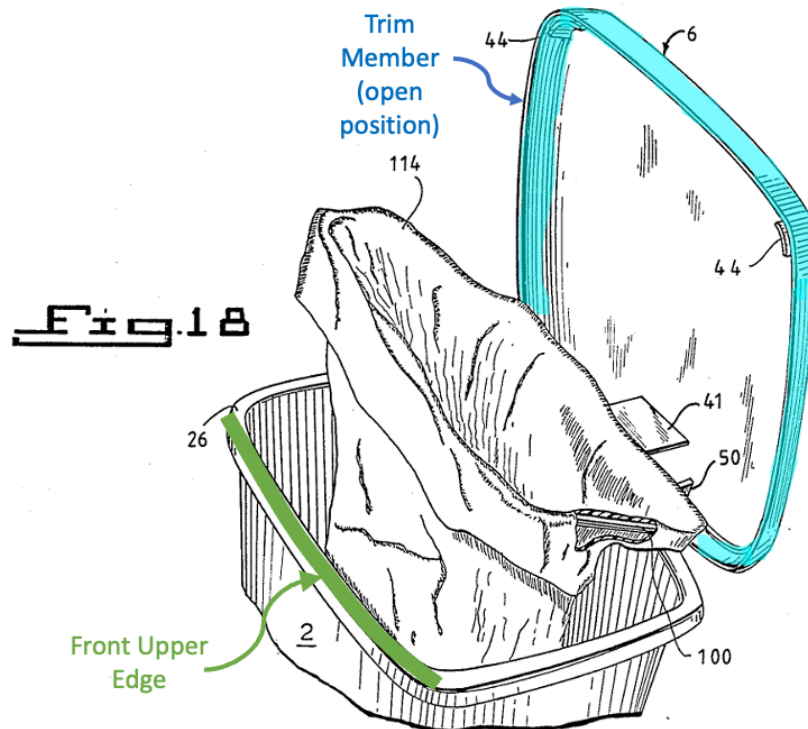
Thus, this element would have been obvious in view of Koda and Miller under this first interpretation.

b. Lid Rim Interpretation

Under the alternative interpretation (that Koda’s lid rim is the “trim member”),

a POSITA would have understood that “in the open position, the front of the trim member is spaced apart from and vertically higher than the front upper edge of the body component” is met by Koda, as shown in the following annotated figures:



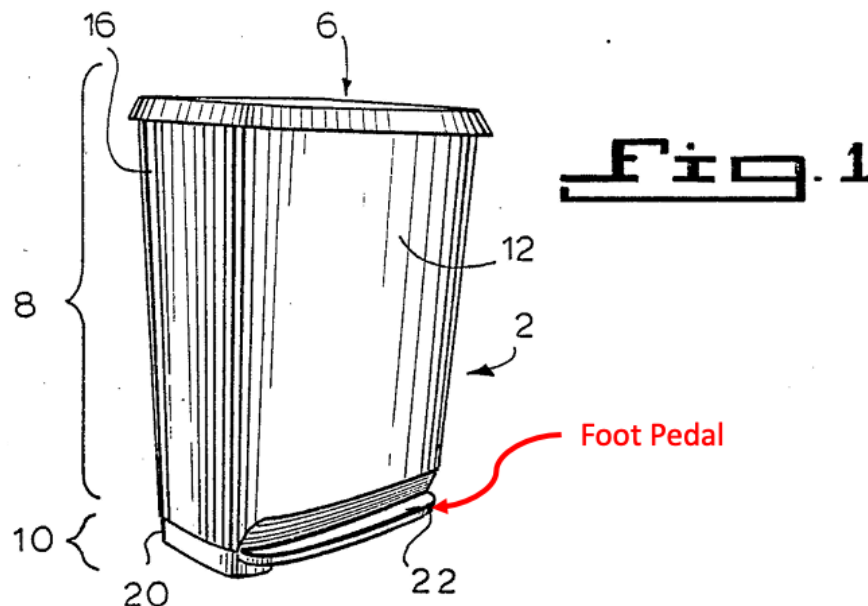


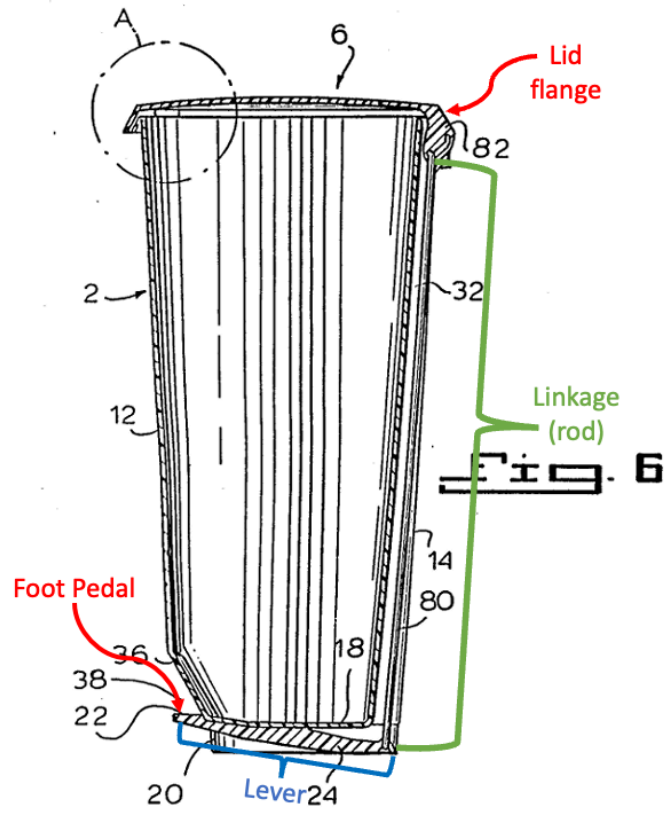
Ex. 1005 at Figs. 16, 18; *see also id.* at 4:30–5:8 (generally describing lid and body), 6:48–7:26 (describing mechanism behind rotation), Figs. 15a–15c (showing mechanism behind lid opening and closing). Koda’s “lid 6 is mounted on the container 2 and is pivotable between a closed position ... and an open position, where it is in a substantially upright, vertical disposition.” *Id.* at 4:30–34. Because the lid rim (trim member) moves with the lid, a POSITA would have understood that, when Koda’s lid is in the open position, the front of the lid rim (front of the trim member) will be in an upright, vertical disposition so that it is spaced apart from and vertically higher than the front upper edge of the container (body component). Ex. 1003 ¶ 176–77.

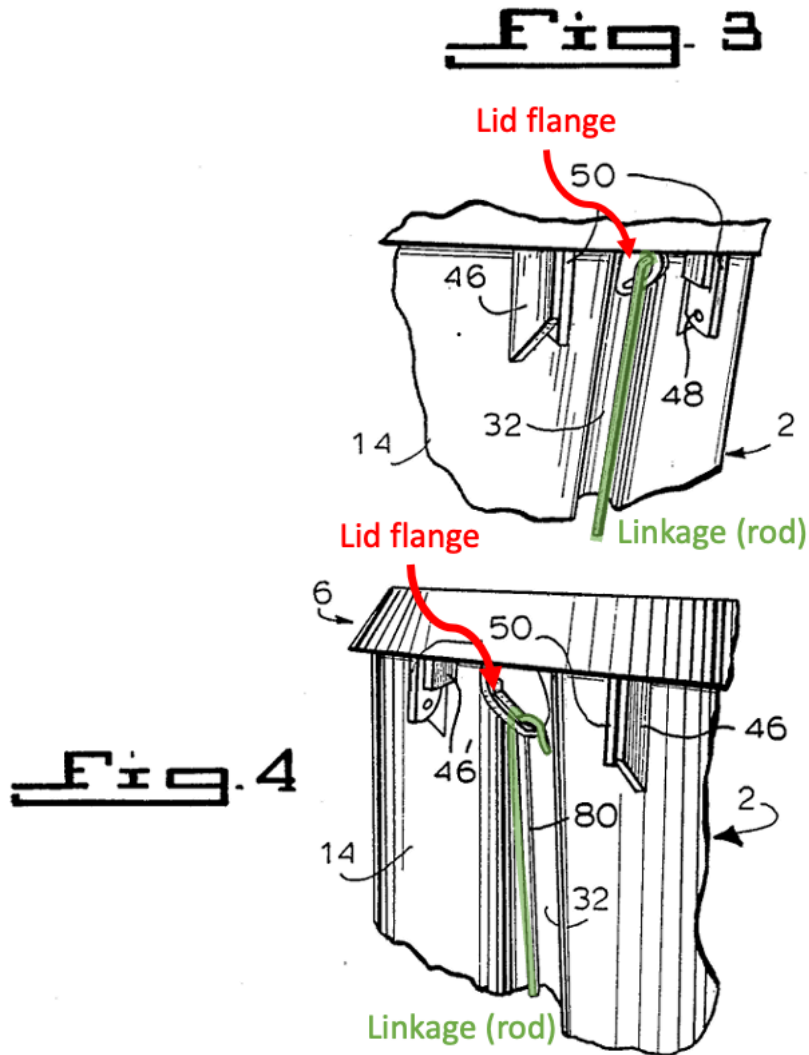
Thus, this element would have been obvious in view of Koda under this second, alternative interpretation, if not anticipated.

8. [1.7] *a power transmission device configured to drive the lid between the lower position and the upper position; and*

Koda's wastebasket features a power transmission device configured to drive the lid between the lower position and the upper position. Ex. 1003 ¶ 178–82. The power transmission device in Koda receives foot power at a foot pedal and transmits this power through a lever through a lever that moves a linkage (e.g., rod) connected to flanges on the lid such that the lid is driven between lower and upper positions. *Id.* Thus, power from a user's foot is transmitted through these components to drive the lid between a lower/closed position and an open/upper position. *Id.* The following figures show these components:

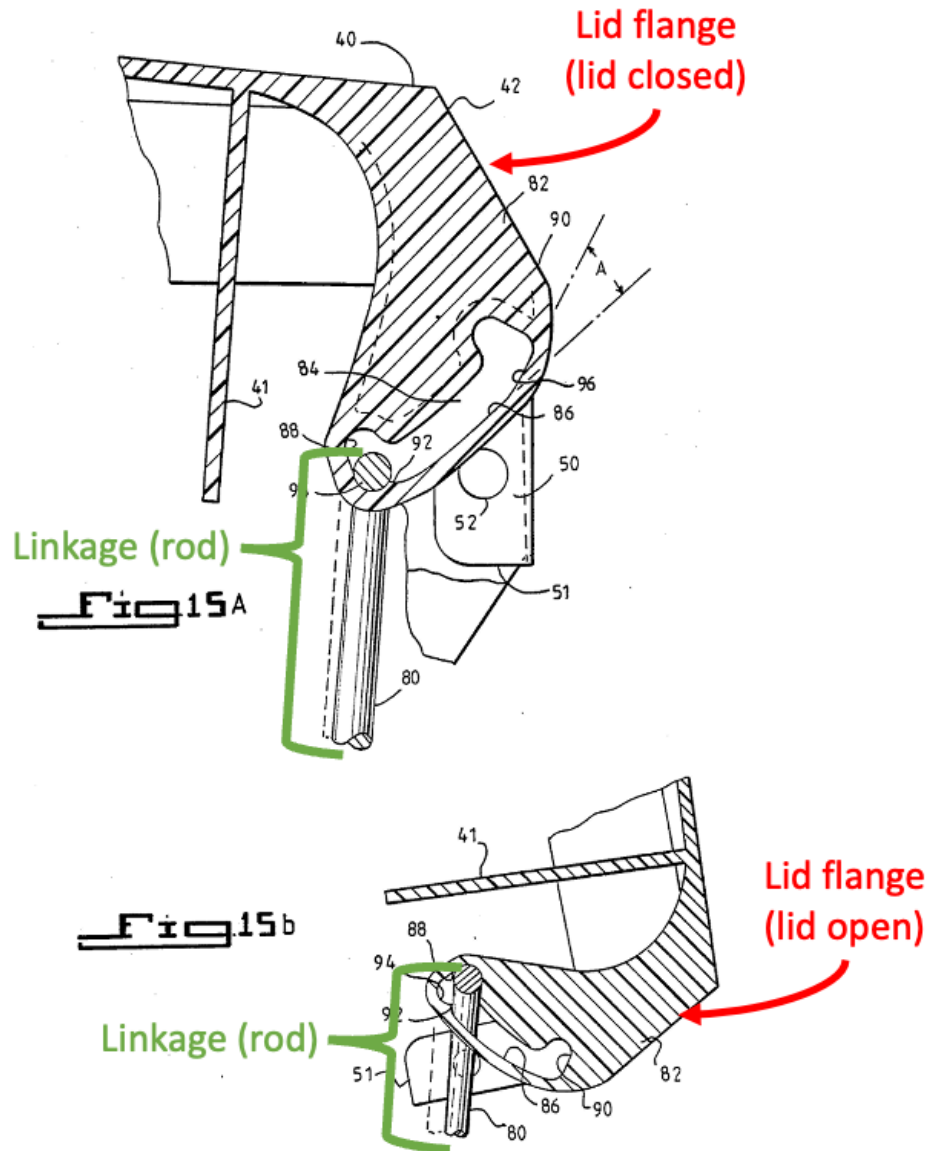


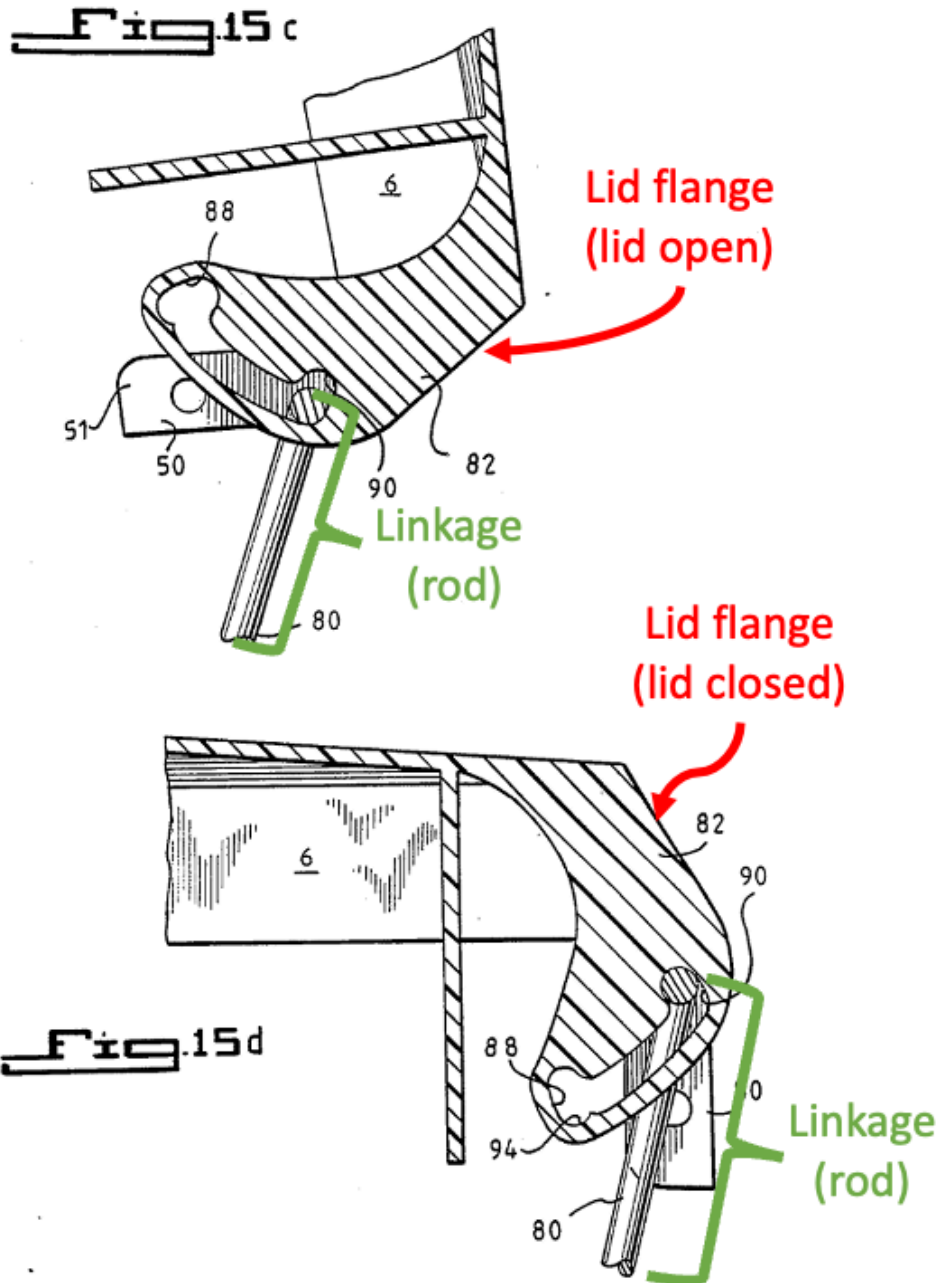




Ex. 1005 at Figs. 1, 3, 4, 6. Koda teaches that its foot pedal 22 is for “operating lever 24 for opening and closing the lid.” Ex. 1005 at 3:51–52, 5:3–66 (providing details about foot pedal and lever). Koda further teaches that a “linkage is provided between the operating lever 24 and the lid to transmit the pivotal movement of the lever to the lid. Preferably the linkage is an elongated metal rod 80 having opposite hooked ends. One end of the rod 80 is received in the flange aperture 72 of the operating lever, and the other end is joined to the lid.” *Id.* at 5:67–6:4.

The following figures show the 15a–d show “sectional views of the lid movement actuation flange of the wastebasket, illustrating in sequence its operation in opening and closing the lid.” *Id.* at 3:20–23.





Id. at Figs. 15a–d; *see also id.* at 6:16–7:28 (describing details of movement); Ex. 1003 ¶¶ 180–84 (explaining details). In sequence, Figure 15a shows a closed lid. *Id.* at 6:23–27, 6:60–66. “When the foot pedal 22 is stepped on, the operating lever 24 pivots to raise the rod 80 into the top of the inner enlargement 88. The rod exerts a

force on the lid flange 82 sufficient to raise the lid from the container and pivot it about the lid mounting pins 48 to a substantially vertical upright position ... as shown in FIG. 15b.” *Id.* at 6:67–7:8. “When pressure on the foot pedal is released, the rod 80 slides ... into the lower out enlargement 90, as shown in FIG. 15c, and the foot pedal returns to its raised state.” *Id.* at 7:9–12. Then, “[i]f the foot pedal is stepped on again, the upper end of the rod linkage 80 will be raised The rod 80 exerts a force on the lid to swing about the pivot axis in the opposite direction to a closed position ... as shown in FIG. 15d.” *Id.* at 7:15–21.

Thus, this element would have been obvious in view of Koda, if not anticipated by Koda.

9. [1.8] *a retaining mechanism configured to maintain the trim member in the open position against the force of gravity.*

A POSITA would have understood that this was met by Koda in two ways.

a. Retaining Ring Interpretation

Under the first interpretation (that Koda’s retaining ring 100 is a trim member), it would have been obvious to a POSITA that Koda’s wastebasket includes a retaining mechanism configured to maintain the trim member in the open position against the force of gravity. Ex. 1003 ¶¶ 186–96. Although Koda does not explicitly repeat the details of this mechanism, Koda refers the POSITA to Miller for additional details

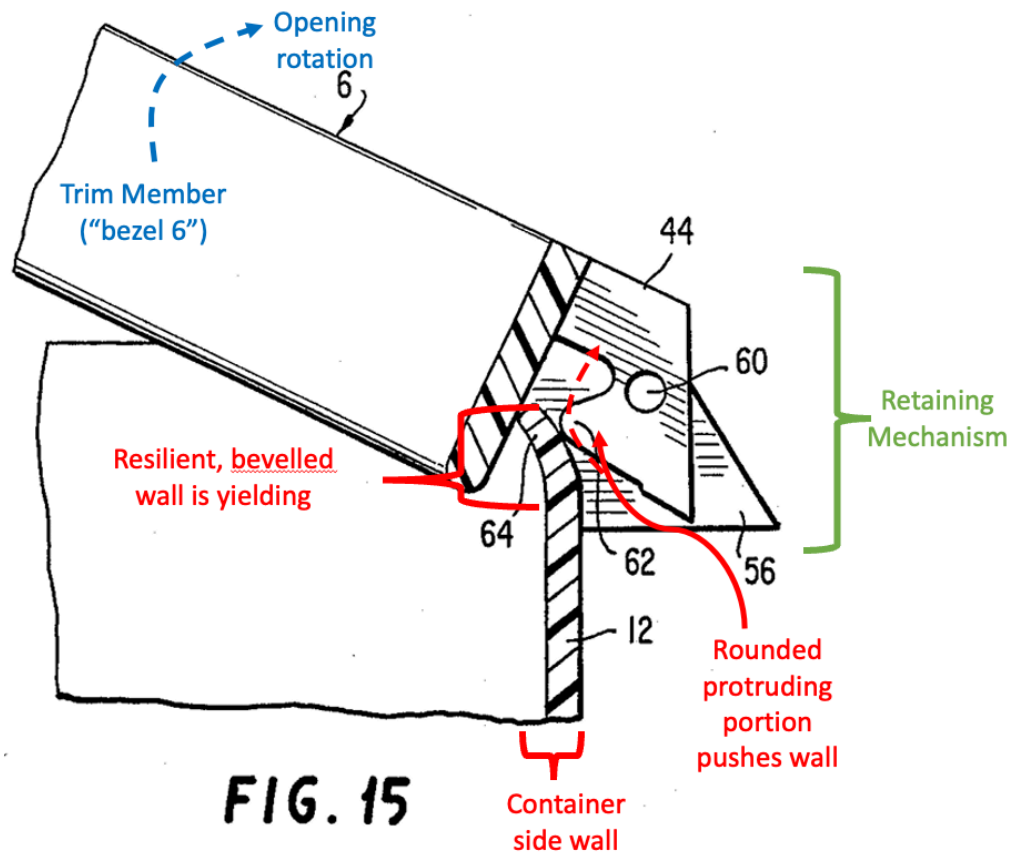
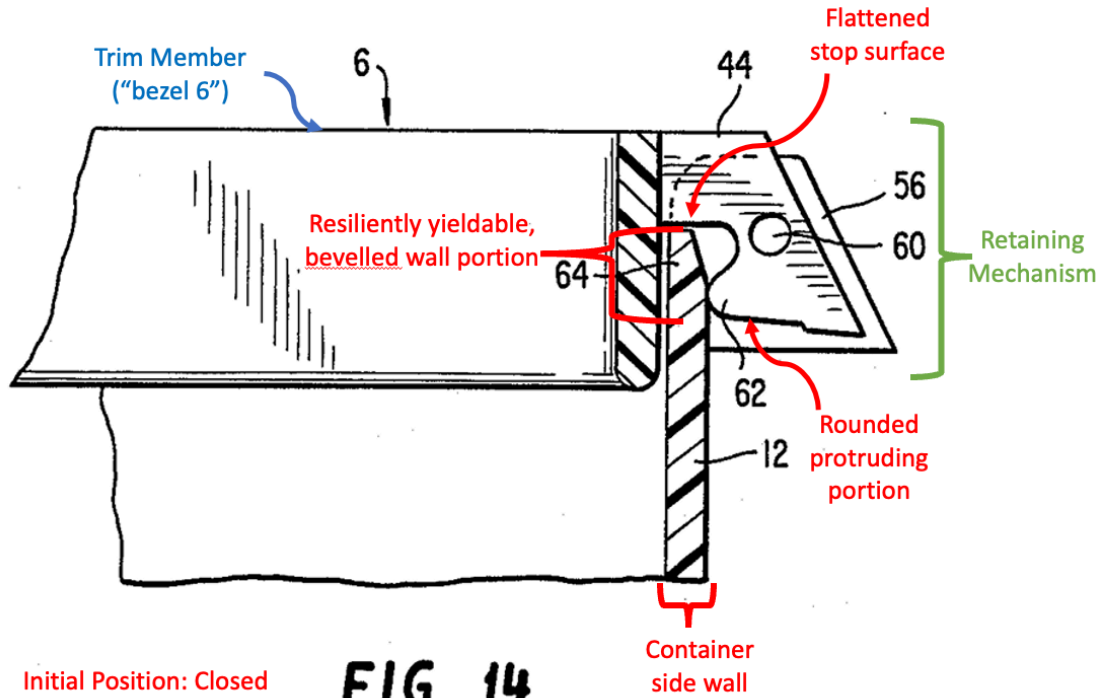
about the operation of Koda's retainer ring. Ex. 1005 at 8:17–31. Thus, a POSITA would have understood that Koda uses and further improves upon the technology described in Miller, and a POSITA would have implemented Koda's retainer ring according to the disclosure of Miller, except for adding a bulge at the rear (the improvement). Ex. 1003 ¶ 187.

Koda's retainer ring is pivotally mounted to the container and used to secure trash bags. Ex. 1005 at 2:43–49, 8:25–30. A POSITA would have turned to Miller and recognized that Miller's bezel 6 is the component that corresponds to Koda's retainer ring 100. Ex. 1003 ¶¶ 186–96.

Miller similarly describes how the bezel 6 is used for holding liners (trash bags) and pivotally mounted on the container, pivoting between an open position and a closed position. Ex. 1006 at 2:10–19, 3:47–55. Miller repeatedly states that its bezel 6 is able to be retained in the raised, open position. *Id.* at 2:25–26, 5:20–25, 5:38–41, 5:58–60, 6:20–22; *see also id.* at 1:56–66, 2:25–40, 5:20–6:29 (providing more context and details); *see* Section VII(C) above (summarizing Miller's mechanism for keeping the bezel raised). Thus, a POSITA would have understood that the same retaining mechanism that maintains Miller's bezel 6 in the open position against the force of gravity is also applicable and used for Koda's corresponding retainer ring. Ex. 1003 ¶¶ 188, 190. This would have the benefit of keeping Koda's retainer ring raised so that a user can replace the trash bag with two free hands, without needing to

use one hand to hold up the retainer ring. *Id.*; Ex. 1006 at 1:21–28, 1:39–53 (criticizing prior art for lacking this benefit), 1:56–66, 5:21–56, 6:18–53 (describing this benefit of the invention). Thus, to the extent Koda does not explicitly describe a mechanism for its retainer ring to maintain the trim member in the open position against the force of gravity, it would have been obvious to implement the retaining mechanism as described in Miller so that users have two free hands to change trash bags. Ex. 1003 ¶¶ 188–90.

Specifically, a POSITA would have understood that the retaining mechanism of Miller that causes its bezel to stay open includes protruding members 62 of its hinge elements 42, which extend past the upper end of the body side wall 64. Ex. 1003 ¶¶ 188–95; Ex. 1006 at 5:21–55. The protruding members 62 are rounded to flex the resiliently yieldable container side wall 64 as the protruding members 62 pivot. Ex. 1006 at 5:30–51, Fig. 15. Then, once the bezel is in the open position, the side walls return to their original position and support the bezel in a locked, raised manner. *Id.* at 5:52–68, Fig. 16. The bezel can be further pivoted to be substantially vertical until a flattened stop surface 68 of the hinge element engages the rear side wall of the container to stop movement. *Id.* at 6:1–17, Fig. 17. In both the angled and substantially vertical positions, the trim member remains open against the force of gravity. This process is shown using the following figures:



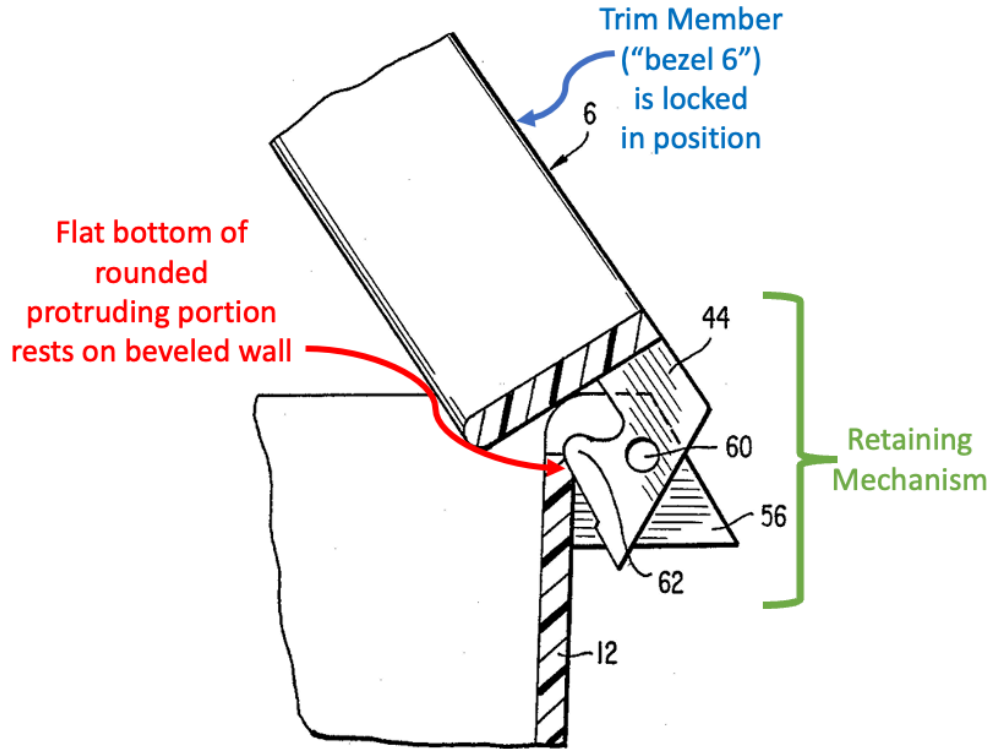


FIG. 16

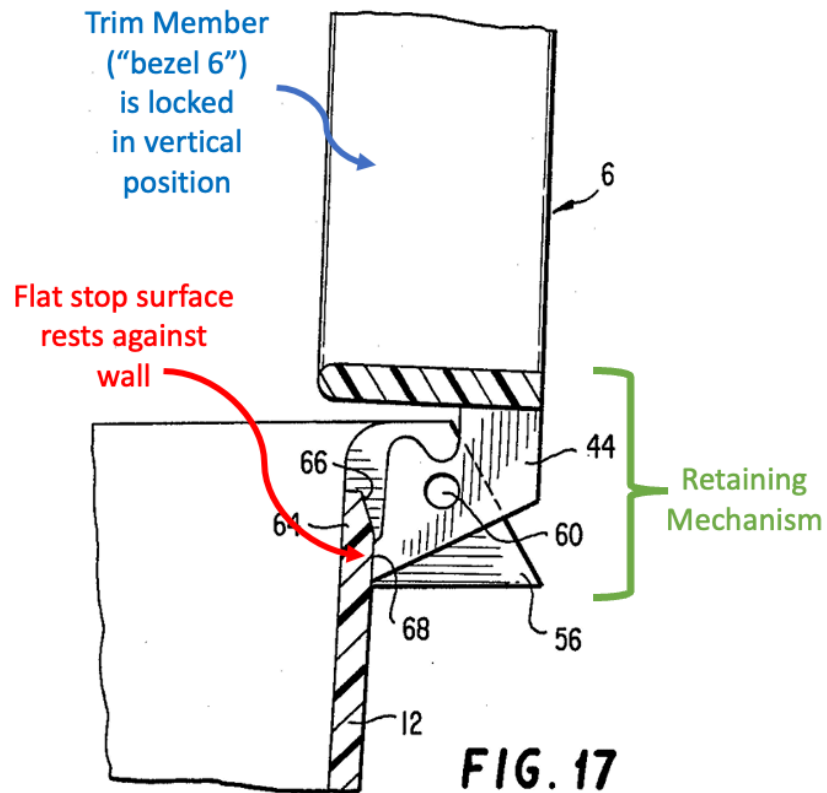
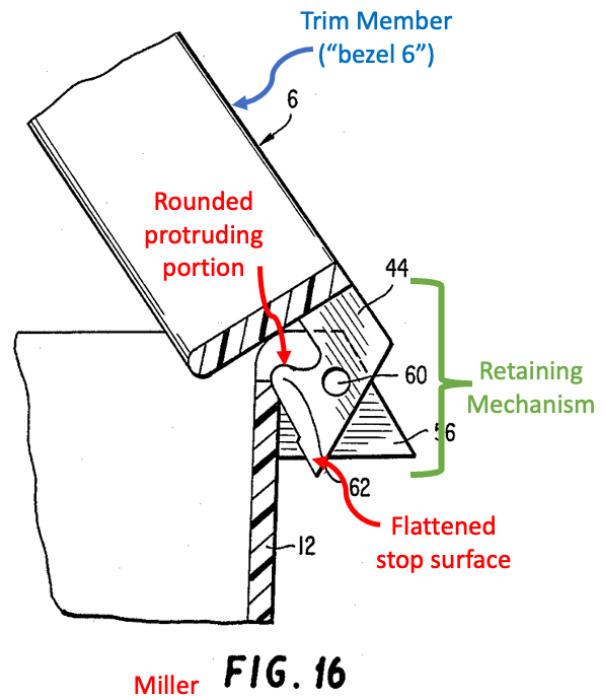
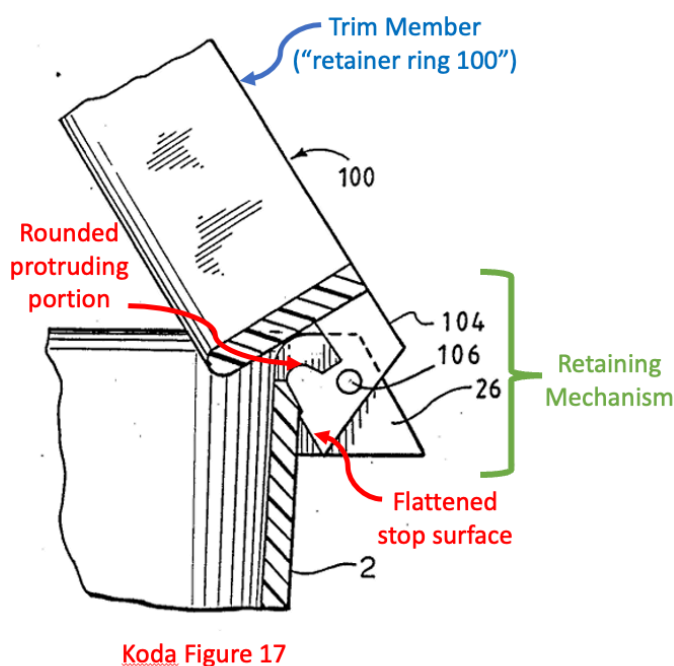


FIG. 17

Ex. 1005 at Figs. 14–17. A POSITA would have understood these elements of Miller to be the claimed retaining mechanism, and that it would have been obvious to use this retaining mechanism in Koda’s wastebasket. Ex. 1003 ¶¶ 186, 196. Indeed, Koda shows that its retainer ring 100 features hinge elements 104 that have the rounded protruding members with the same shape as described in Miller, so these would operate the same way as described in Miller. *Id.* ¶¶ 188–90, 196.

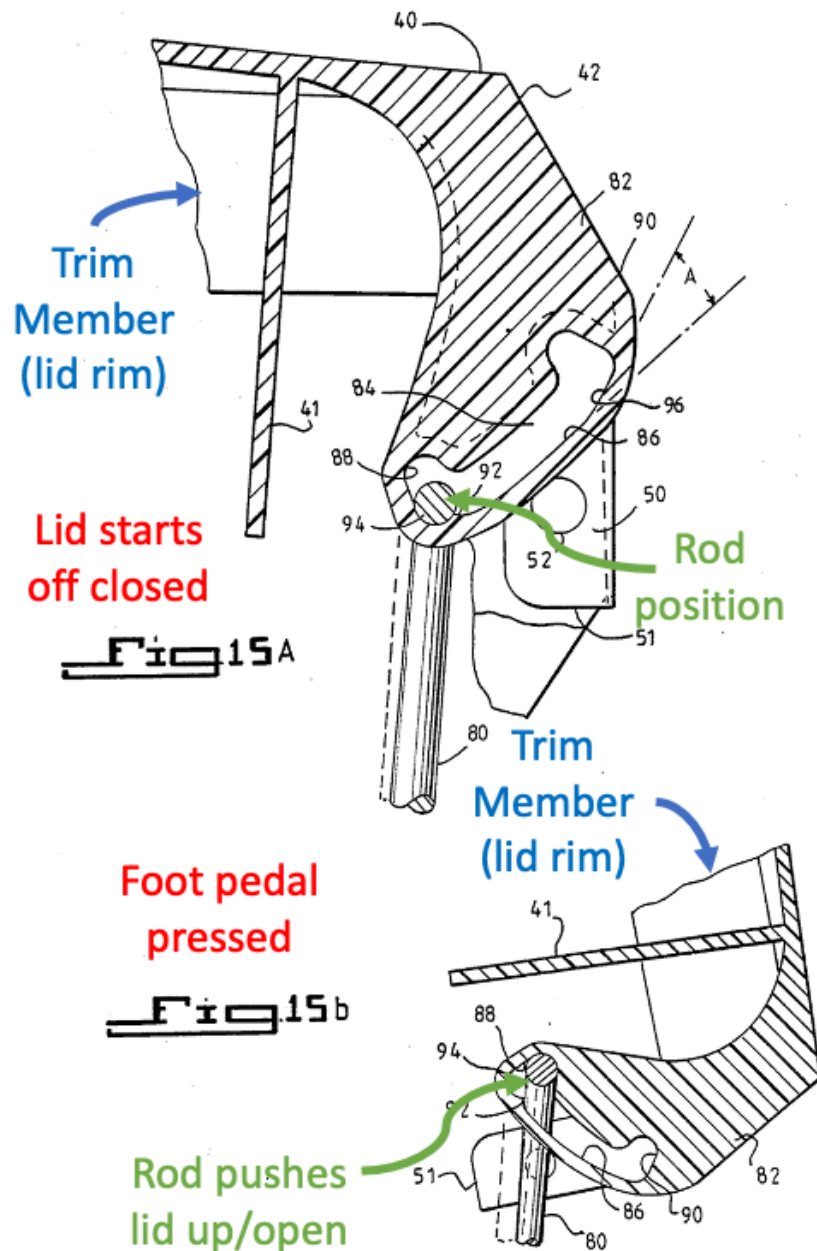


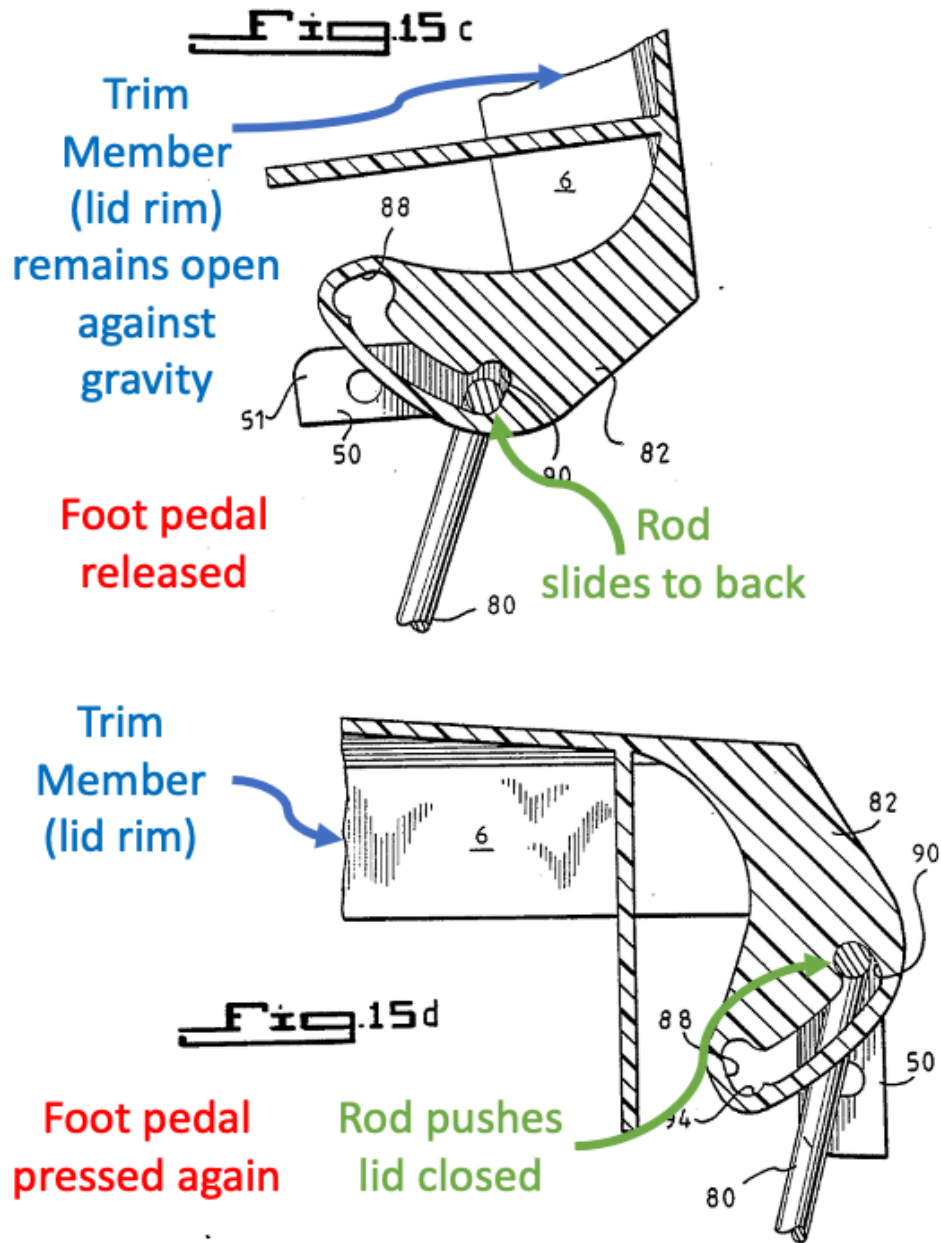
Ex. 1005 at Fig. 17; Ex. 1006 at Fig. 16. Thus, this element would have been obvious in view of Koda and Miller under this first interpretation.

b. Lid Rim Interpretation

Under the second, alternative interpretation (that Koda’s lid rim is the “trim member”), a POSITA would have understood that Koda includes a retaining

mechanism configured to maintain the trim member in the open position against the force of gravity. Ex. 1003 at ¶¶ 197–202. A POSITA would understand that Koda to describe that after the foot pedal is stepped on (Ex. 1005 at 6:58–7:8, Fig. 15b) and released (*id.* at 7:5–14, Fig. 15c), the lid remains in the raised state until the foot pedal is stepped on again (*id.* at 7:15–51, Fig. 15d). Ex. 1003 ¶¶ 198–202.





Ex. 1005 at Figs. 15a-d; *see also id.* at 6:16–7:28 (describing details of movement).

In sequence, at Figure 15a, the lid is closed. *Id.* at 6:23–27, 6:60–66. “When the foot pedal 22 is stepped on, the operating lever 24 pivots to raise the rod 80 into the top of the inner enlargement 88. The rod exerts a force on the lid flange 82 sufficient to raise

the lid from the container and pivot it about the lid mounting pins 48 to a substantially vertical upright position ... as shown in FIG. 15b.” *Id.* at 6:67–7:8. “When pressure on the foot pedal is released, the rod 80 slides ... into the lower out enlargement 90, as shown in FIG. 15c, and the foot pedal returns to its raised state.” *Id.* at 7:9–12. A POSITA would have understood that, during this time, the lid and its rim (the claimed “trim member”) remain in the raised state shown in Figure 15c, against gravity. It remains there until “the foot pedal is stepped on again,” at which time “the upper end of the rod linkage 80 will be raised The rod 80 exerts a force on the lid to swing about the pivot axis in the opposite direction to a closed position ... as shown in FIG. 15d.” *Id.* at 7:15–21.

For these reasons, a POSITA would have understood that the components described above and shown in Figures 15a–d of Koda form a retaining mechanism configured to maintain the trim member in the open position against the force of gravity, as claimed. Ex. 1003 ¶¶ 197–202.

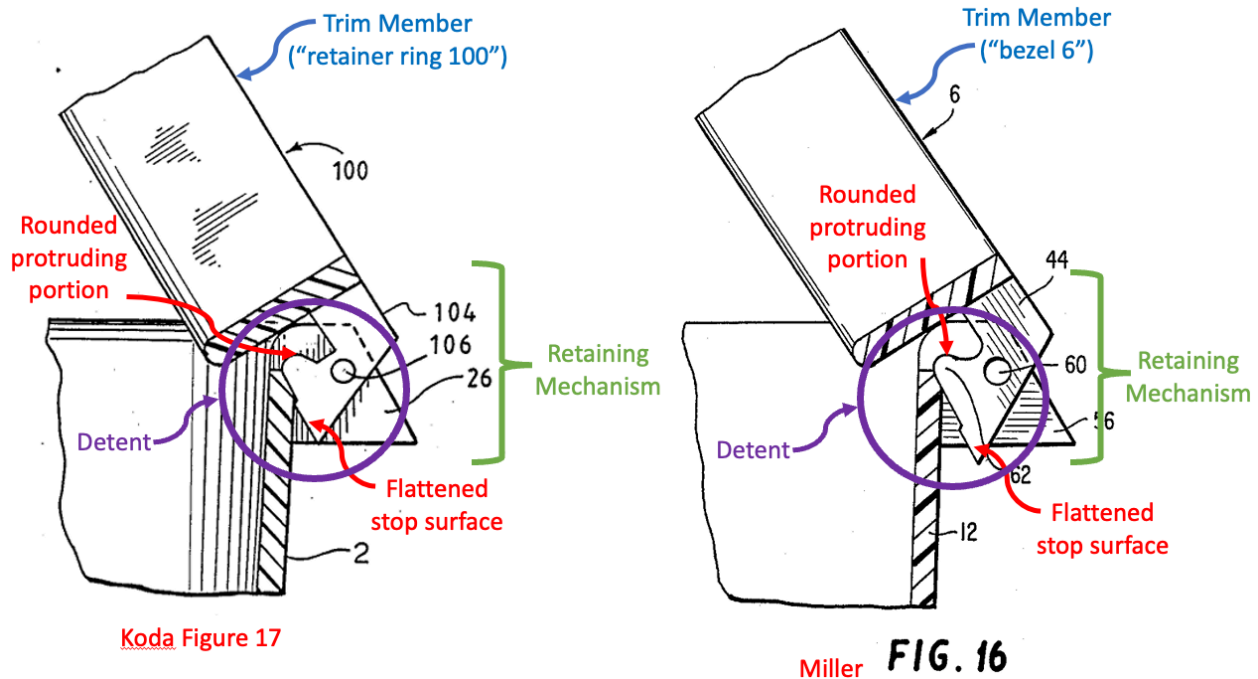
B. Claim 2: *The trash can assembly of claim 1, wherein the retaining mechanism comprises a detent.*

The trash can assembly of claim 1 is obvious as discussed in Section X(A).

a. Retaining Ring Interpretation

Under the first interpretation (that Koda’s retaining ring 100 is a trim member), a POSITA would have further found it obvious that the retaining mechanism

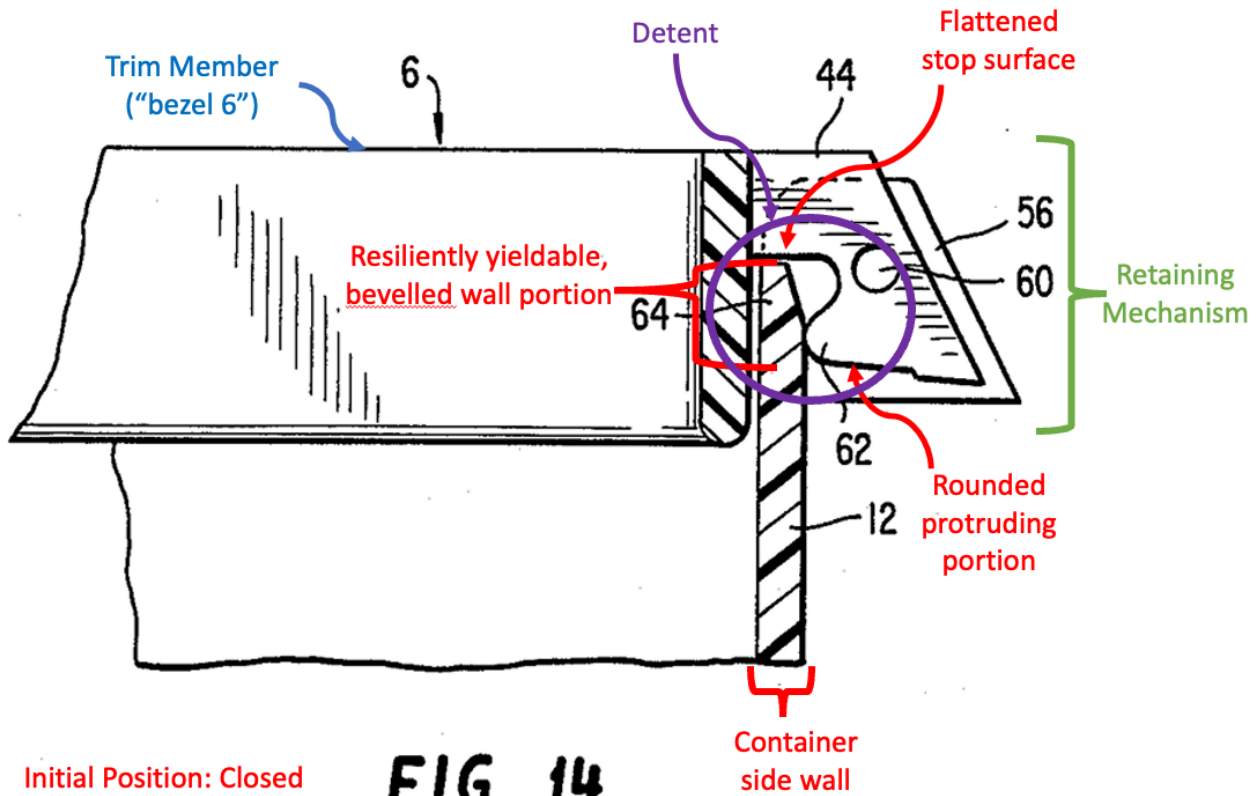
comprises a detent. Ex. 1003 ¶¶ 204–06. As discussed above in section VIII(A)(9) for element [1.8], Miller provides additional details about the retaining mechanism of Koda.

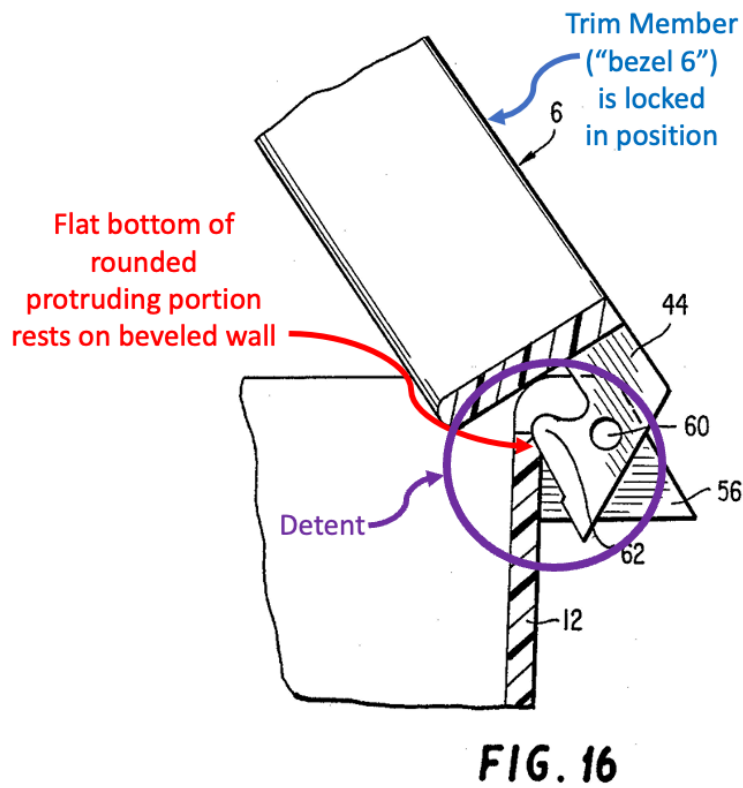
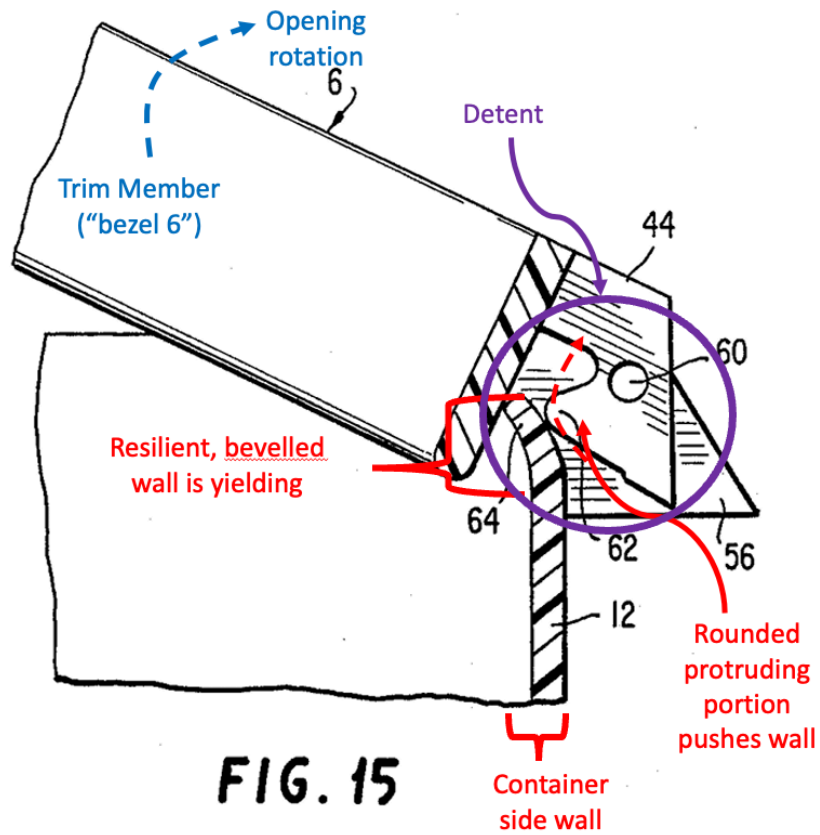


Ex. 1005 at Fig. 17; Ex. 1006 at Fig. 16. Miller explains how a rounded protrusion⁶ (labeled above in red) pushes against the top of the container side wall (element 2 in Koda Figure 17, corresponding to element 12 in Miller Figure 16), causing the wall to flex. Ex. 1006 at 5:20–51. Once the rounded protruding portion rotates far enough, the side wall returns to its original position, and causing the underside of the

⁶ In litigation, Patent Owner asserts that “a protrusion” labeled “J” infringes this claim. Ex. 1009 at 9, 17, 20, 22.

protruding portion to rest on and be supported by a beveled corner of the side wall until a user exerts a sufficient downward force to lower the bezel. *Id.* at 5:52–68. This process is shown below:

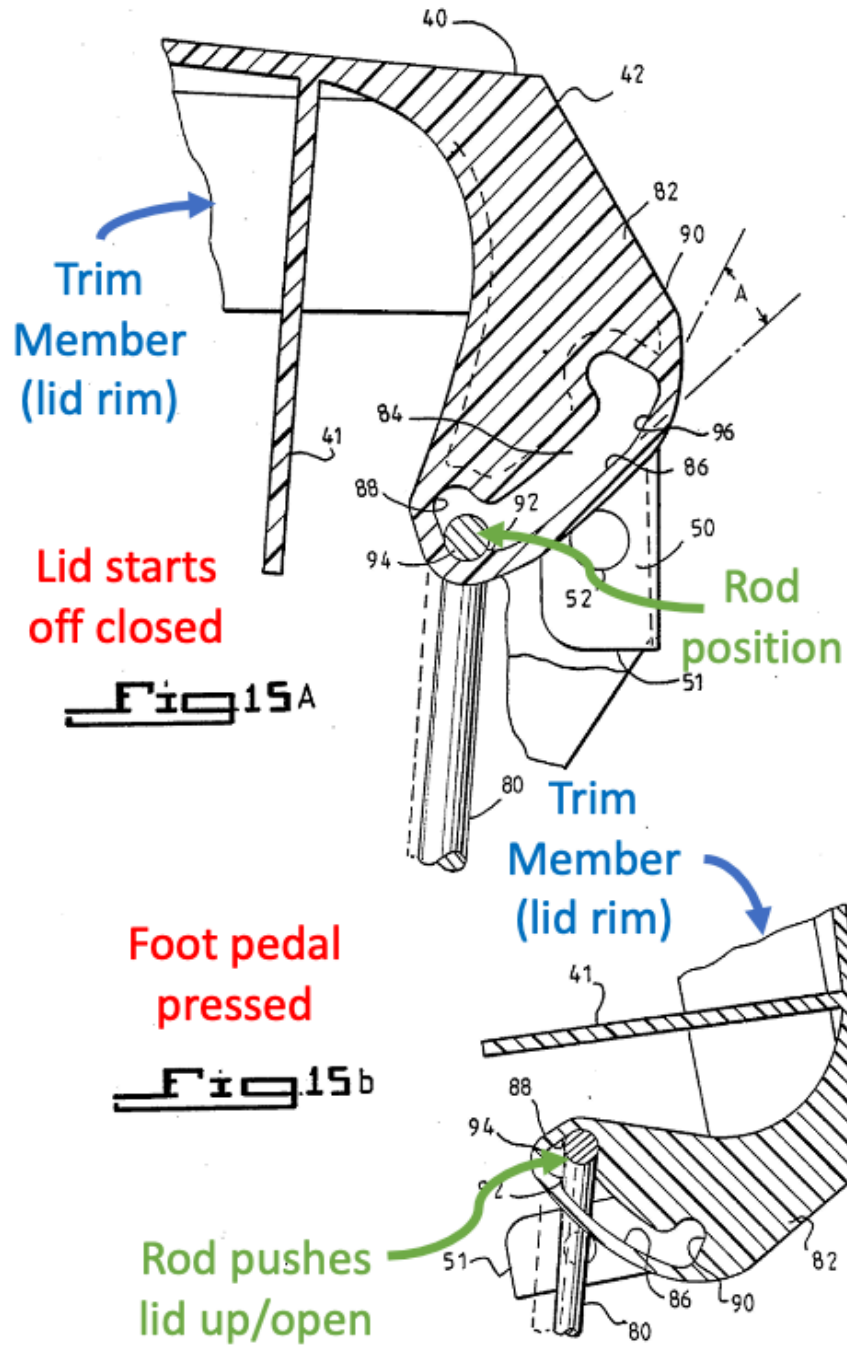


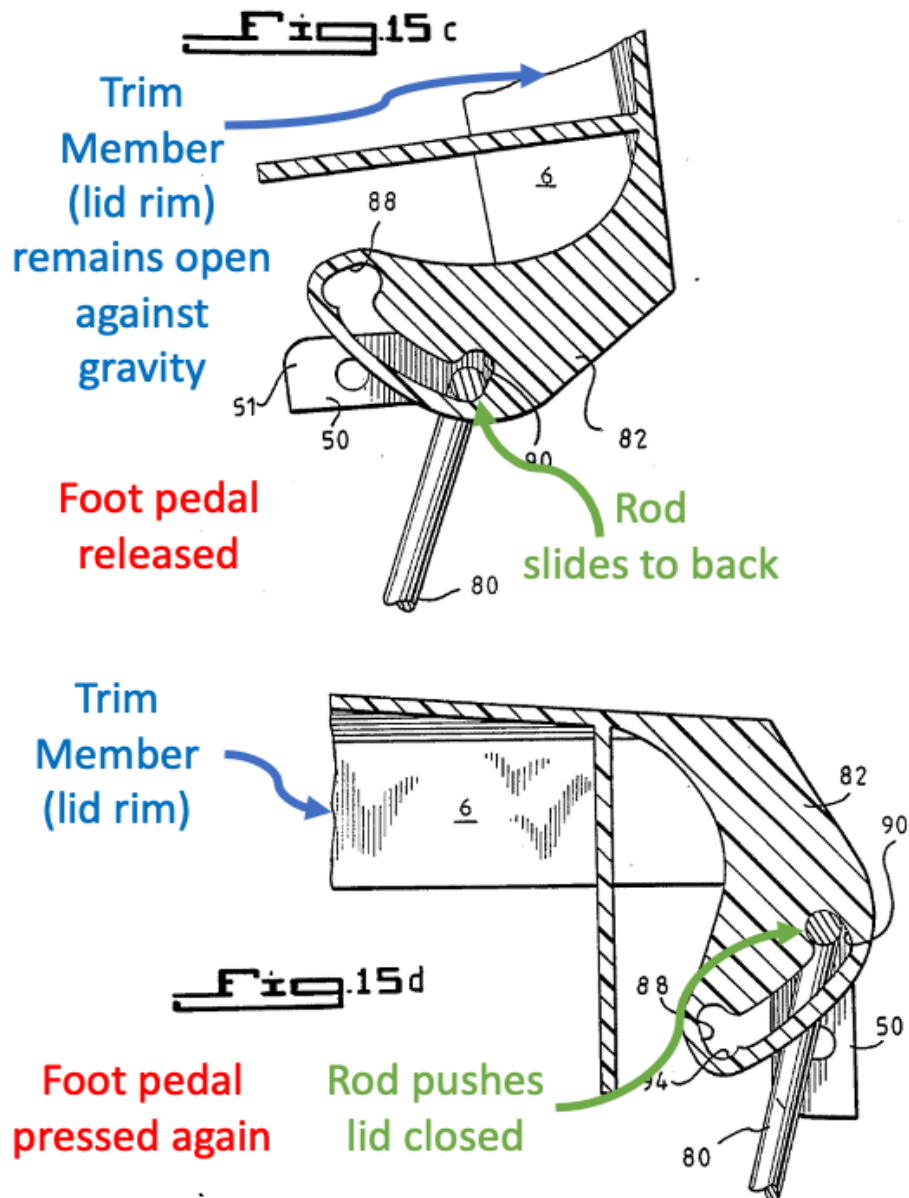


Id. at Figs. 14–16 (all annotated). For these reasons, a POSITA would have found claim 2 to be obvious in view of Koda and Miller.

b. Lid Rim Interpretation

Under the second interpretation (that Koda’s lid rim is a trim member), a POSITA would have further found it obvious that the retaining mechanism comprises a detent. Ex. 1003 ¶¶ 207–08. As discussed above in section VIII(A)(9)(b) for element [1.8], Koda describes how stepping on the foot pedal opens the lid and lid rim (Ex. 1005 at 6:58–7:8, Figs. 15a–15b), and when the foot pedal is released, the rod moves as shown in Figures 15b–15c, and the lid remains in the raised state. *Id.* at 7:5–14. The lid, lid rim, and rod remain in the position of Figure 15c until the user steps on the foot pedal again. *Id.* at 7:15–26. There, the rod is caught and prevents motion until released.





Ex. 1005 at Figs. 15a-d; *see also id.* at 6:16–7:28 (describing details of movement).

These components pictured above, including the rod and the lid's flange with a shaped slot therein, form a detent. Ex. 1003 ¶¶ 207–08. For these reasons, a POSITA would have found claim 2 to be obvious in view of Koda and Miller.

C. Claim 10**1. [10.Pre] The trash can assembly of claim 1,**

The trash can assembly of claim 1 is obvious as discussed in Section X(A).

2. [10.1] *wherein the trim member further comprises an exterior wall that extends:*

As shown above in Section X(A)(5)(b), under the interpretation that the lid rim is the trim member, the following figures of Koda show how the trim member forms an exterior wall that extends as described in the following subsections. This trim member highlighted below forms the exterior wall of the lid.

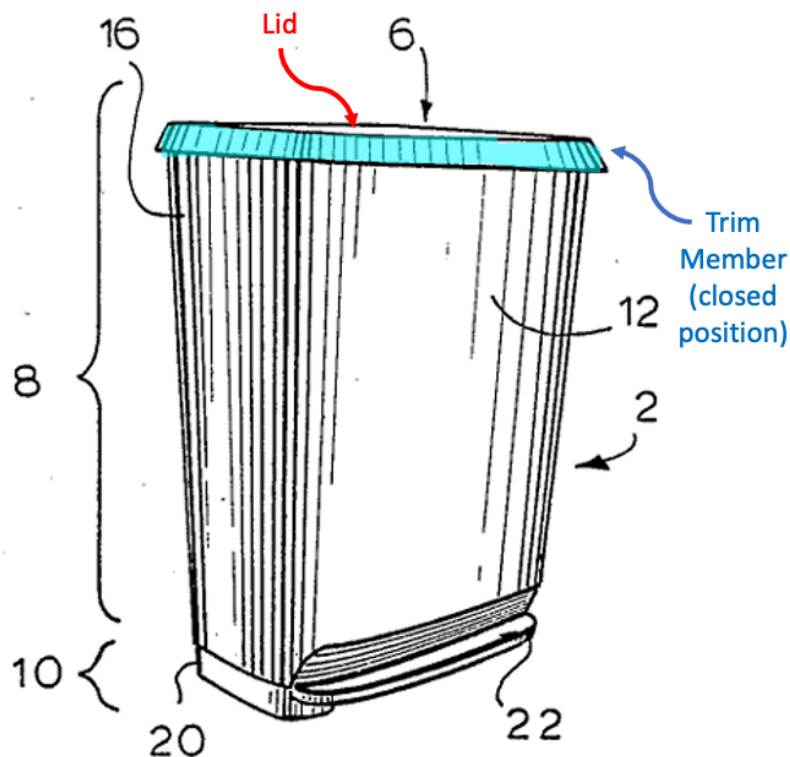
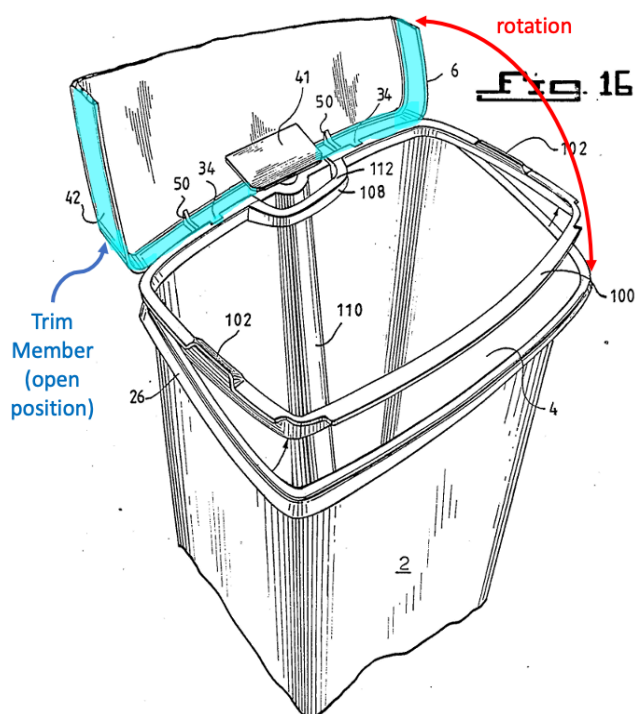
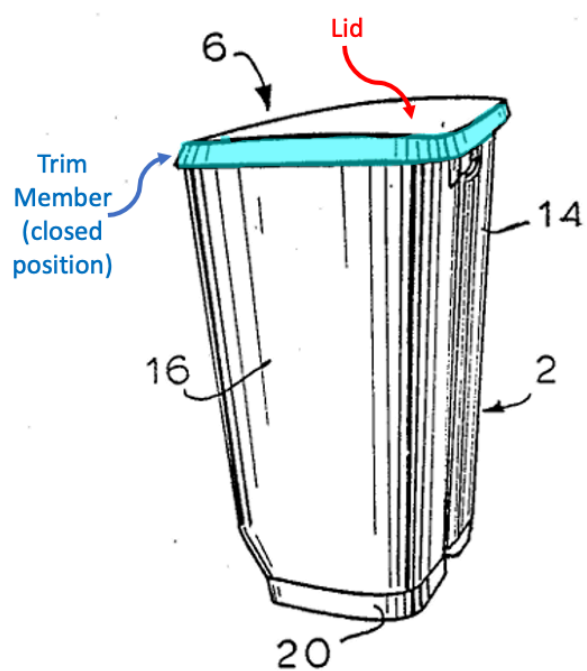
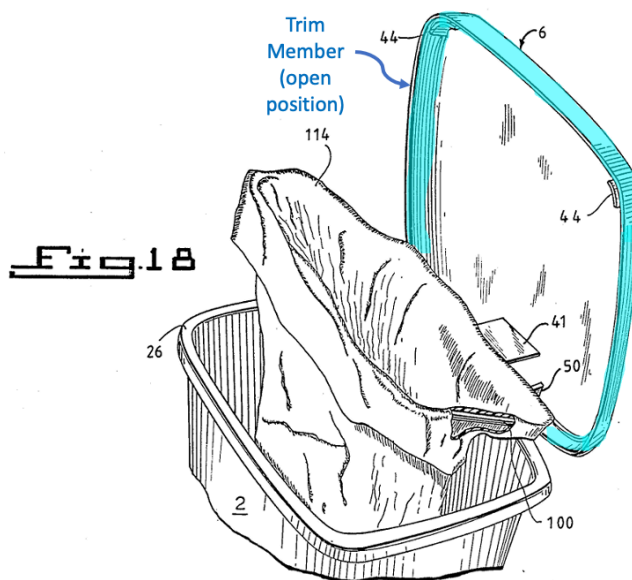


Fig. 2



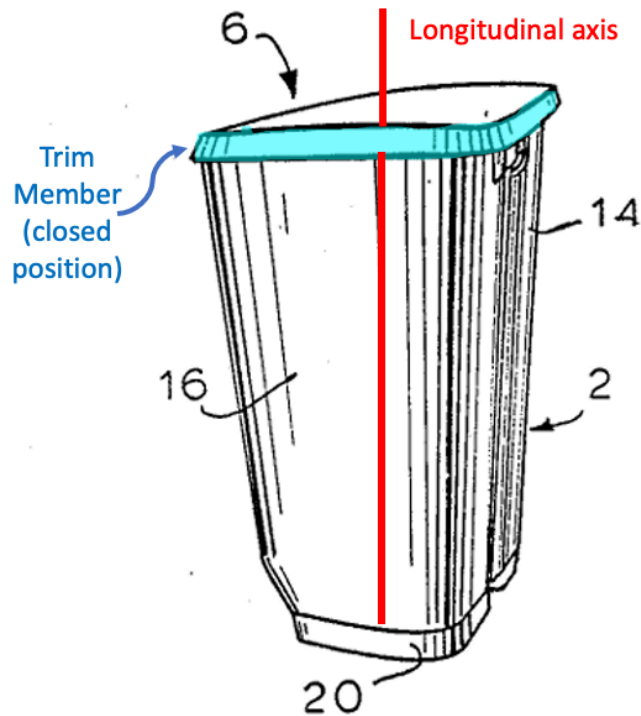


Ex. 1005 at Figs. 1, 2, 16, 18; *see also id.* at 4:9–5:2 (describing the rim 42 in more detail). Thus, a POSITA would have found this element to be obvious in view of Koda and Miller. Ex. 1003 ¶¶ 210–11.

3. [10.2] *generally parallel with a longitudinal axis of the trash can;*

A POSITA would have understood from Figure 2 of Koda that the trash can has the longitudinal axis illustrated in Figure 2 below, and that the wall of the trim member runs generally parallel with the longitudinal axis when the trim is closed.⁷ Ex. 1003 ¶¶ 212–13.

⁷ Patent Owner’s infringement contentions similarly assert that exterior wall “M” is parallel to longitudinal axis “K.” Ex. 1009 at 10, 15–16.

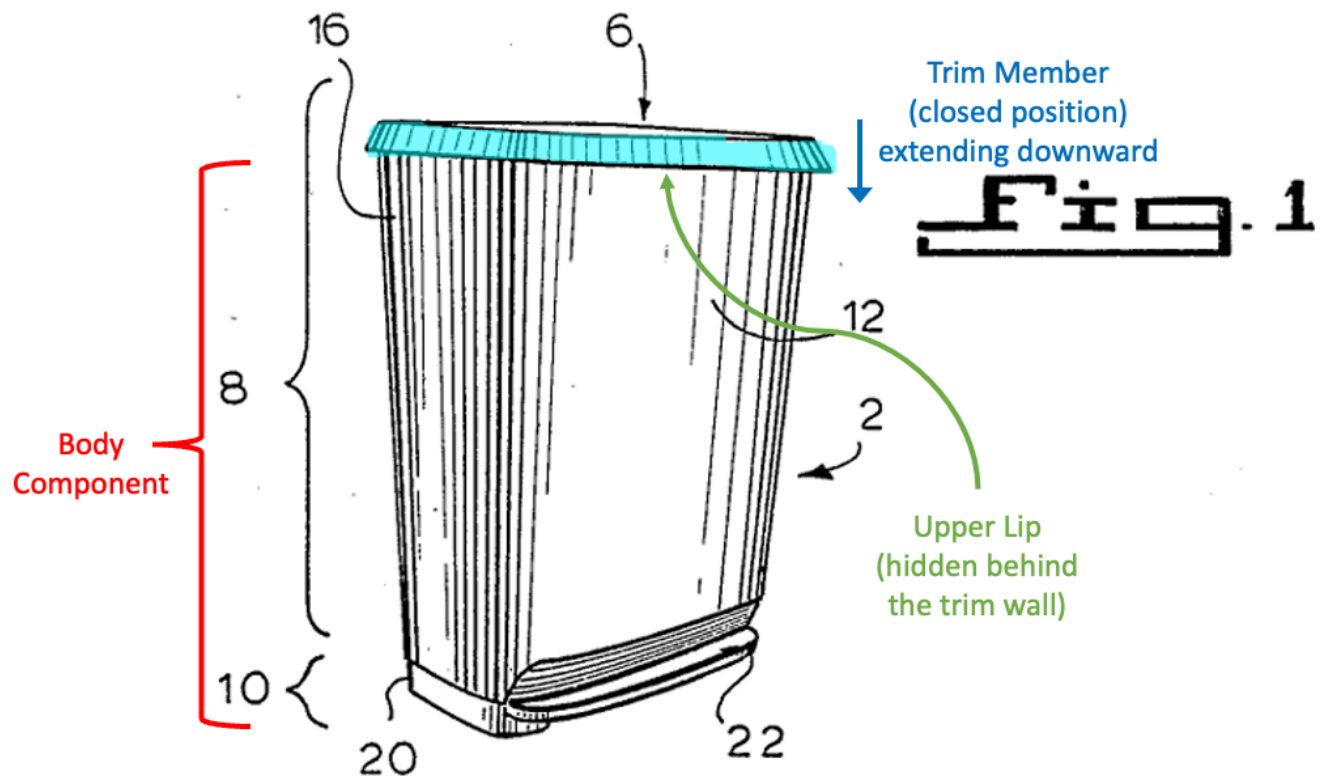
Fig. 2

Ex. Koda at Fig. 2. Koda states that this part of the lid “slopes downwardly,” meaning that it runs up and down, generally parallel to the up-down (longitudinal) axis. Ex. 1005 at 4:9–22. Thus, a POSITA would have found this element to be obvious in view of Koda and Miller, if not anticipated.

4. [10.3] *downward beyond an upper lip of the body component;*

A POSITA would have understood from Figure 2 of Koda that the trash can has the body component seen in Figure 1 below, and that the wall of the trim member runs downward beyond an upper lip of the body component. Ex. 1003 ¶ 214. Indeed,

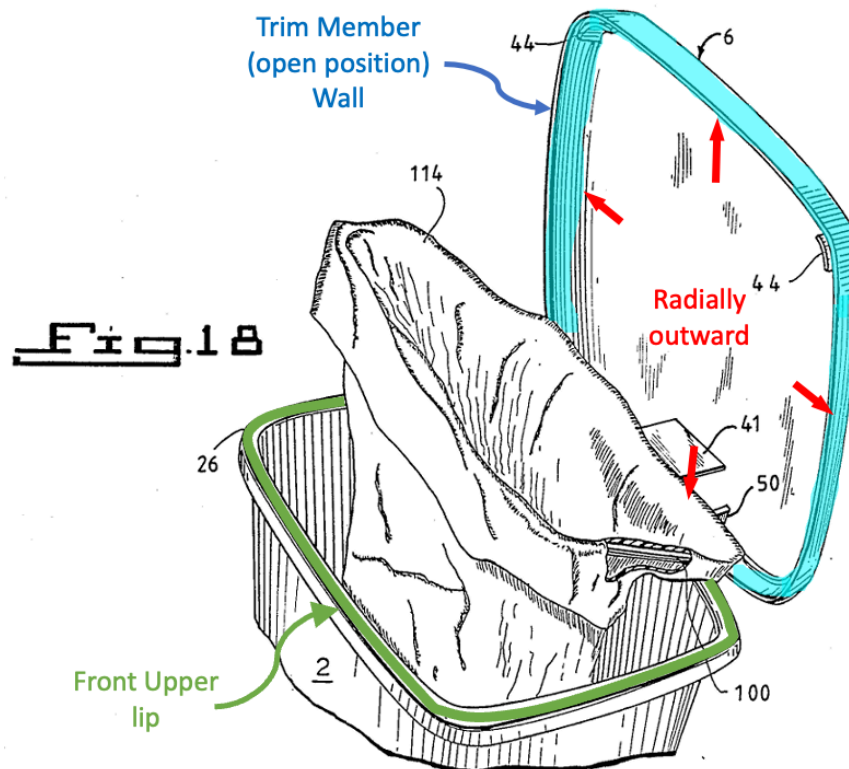
this is the case because Figure 1 shows that the exterior wall obscures the upper lip. *Id.* Moreover, Koda states that this part of the lid rim extends “slightly below the edge of the container rim 26,” meaning it extends downward beyond an upper lip of the body component, “so that it can mount closely on the container and hide the container rim from view when the lid is in the closed position.” Ex. 1005 at 4:9–22.

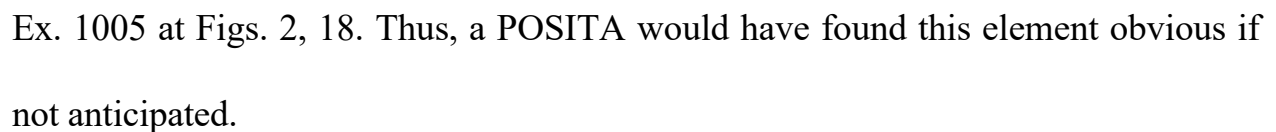


5. [10.4] *and radially outward from the upper lip of the body component.*

A POSITA would have understood from Figure 2 of Koda that the wall of the trim member extends radially outward from the upper lip of the body component. Ex. 1003 ¶ 215. Koda states that this part of the lid rim extends “extends about the

periphery of the top wall 40 and slopes ... outwardly from the top wall” such that it will “hide the container rim from view when the lid is in the closed position.” Ex. 1005 at 4:9–22. This means that Koda’s lid rim (the claimed wall) extends about the periphery and outward (radially outward) from the top wall (upper lip of the body). Ex. 1003 ¶ 215. The following annotated figures show these components:



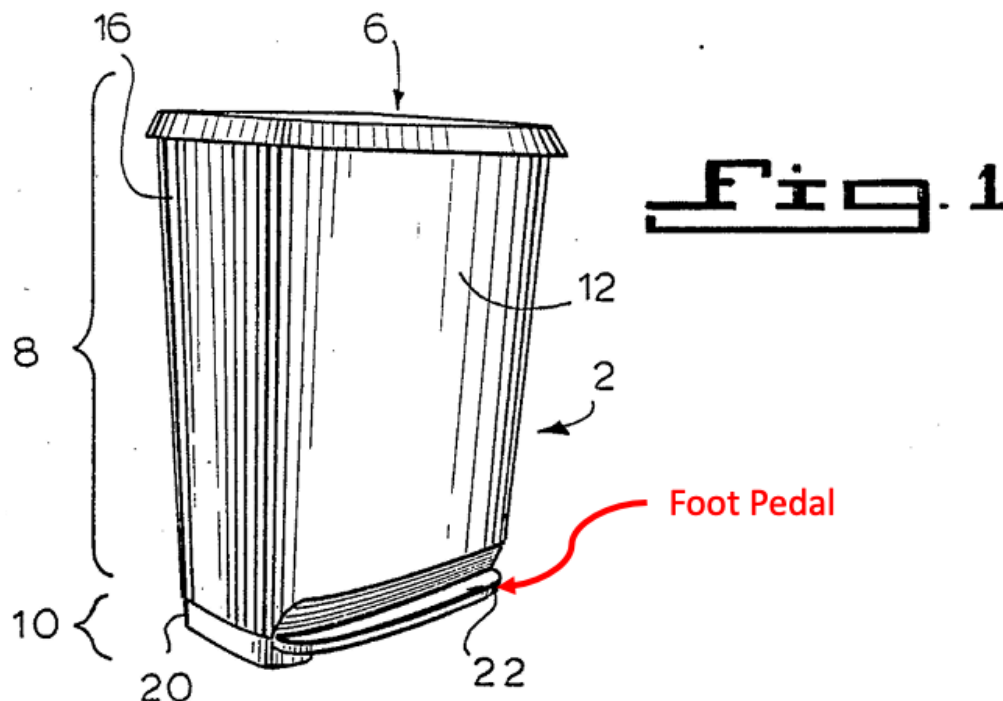


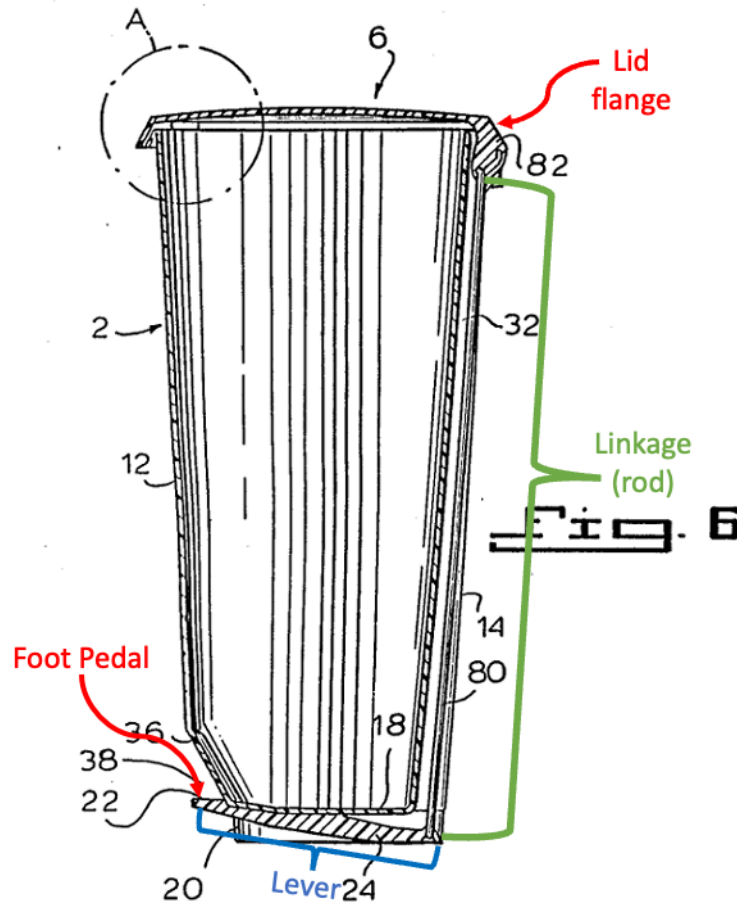
96

E. Claim 15: The trash can assembly of claim 1, wherein the power transmission device comprises a footpedal.

The trash can assembly of claim 1 is obvious as discussed in Section X(A).

For the reasons described in Section X(A)(8) above, the transmission device of Koda includes a footpedal. Koda states that its “wastebasket of the present invention is further provided with a foot operated pedal mechanism for both opening and closing the lid. This structure is shown generally in FIG. 6 and in greater detail in FIGS. 11-15. U.S. Pat. No. 4,785,964 also shows and describes this type of structure.” Ex. 1005 at 5:3–8; *see also id.* at 5:27–43 (describing foot pedal), 5:44–6:5 (describing how the foot pedal transmits power through the lever up through the rod).





Ex. 1005 at Figs. 1, 6. Thus, a POSITA would have found this element obvious, if not anticipated. Ex. 1003 ¶ 219.

XI. Ground IV: Obvious Over Koda, Miller, and Yang '532

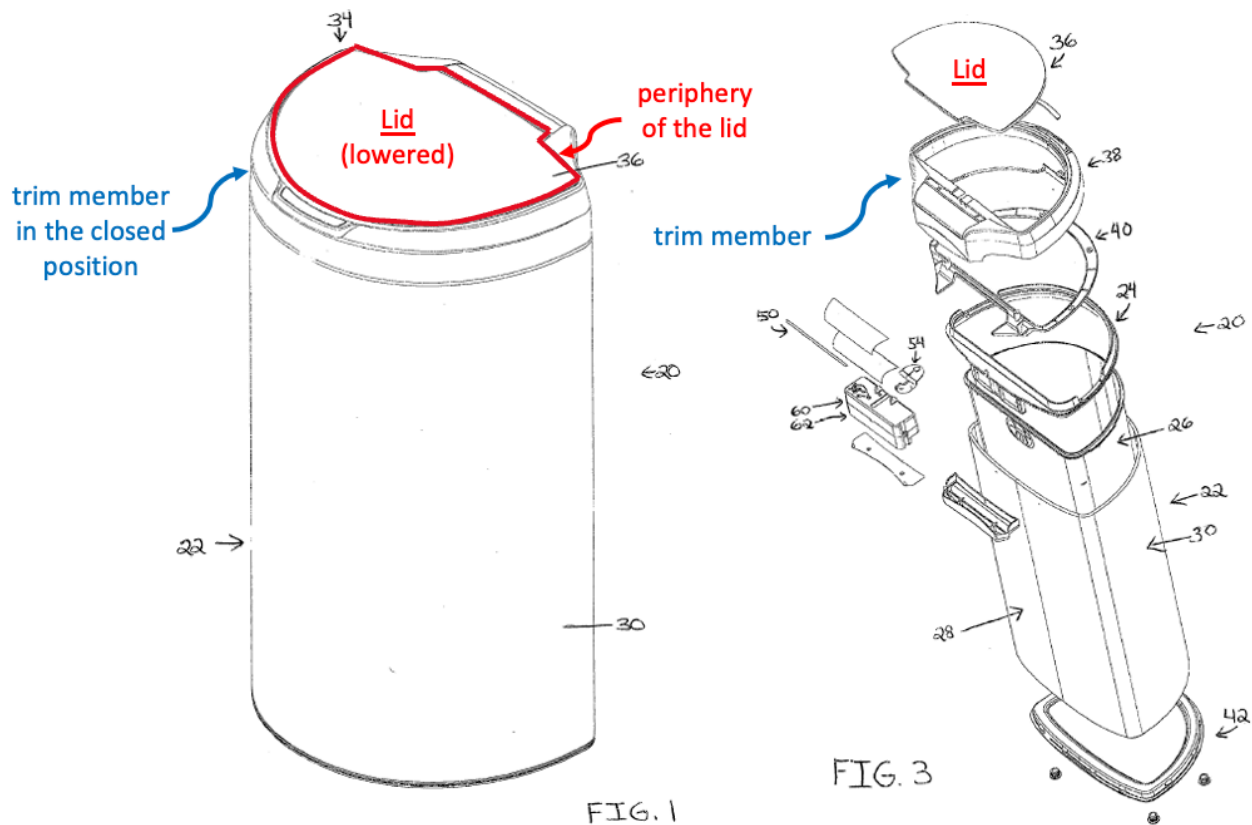
A. Claim 7

1. [7.Pre] *The trash can assembly of claim 1, wherein:*

As discussed in Ground III, the trash can assembly of claim 1 would have been obvious in view of Koda and Miller, under the interpretation that Koda's retaining ring is the trim member.

2. [7.1] *a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position; and*

Koda and Miller do not explicitly show this element. But as explained in Section IX(A) above, Yang '532 does.



Ex. 1008 at Figs. 1, 3.

It would have been obvious to modify Koda's lid to make it operate as shown by Yang '532 to close within the trim. Ex. 1003 ¶¶ 223. As explained in Section XI(A)(2) above, modifying the lid like this would have been a simple aesthetic design choice. The POSITA would have simply shrunk Koda's lid slightly so that it closed

within the trim to rest on an inset, and otherwise kept rear of the hinge extended to connect to the hinge. Ex. 1003 ¶ 223. With this modification, “a majority of the periphery of the lid is received in the trim member when the trim member is in the closed position and the lid is in the lower position,” as claimed.

3. [7.2] *a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position.*

A POSITA would have found this obvious because when a user lifts Koda’s lid while the trim is closed, the lid is lifted outside of the trim member such that “a majority of the periphery of the lid is positioned outside of the trim member when the trim member is in the closed position and the lid is in the upper position,” as claimed. Ex. 1003 ¶ 224.

B. Claim 13: *The trash can assembly of claim 1, wherein the power transmission device comprises a motor.*

As discussed in Ground III, the trash can assembly of claim 1 would have been obvious in view of Koda and Miller. Koda and Miller do not explicitly teach that “the power transmission device comprises a motor,” as claimed.

Yang ’532 teaches a “trash can with power operated lid.” Ex. 1008, title. Yang ’532 teaches how “an enclosed receptacle can be provided with a power operated lid or door with a drive mechanism or motor and gear assembly.” *Id.* at [0011]. The motor

and gears are shown in Figure 4. *Id.* at [0027], Fig. 4; *see also id.* at [0042] *et seq.* (describing how the motor, gear assembly, battery, sensors, control algorithm, and other components work together to automatically open and close the lid).

A POSITA would have found it obvious to replace the foot-powered transmission device of Koda with a motor, gear assembly, battery, sensors, control algorithm, and other components as described in Yang '532. Ex. 1008 at [0042] *et seq.*; Ex. 1003 ¶¶ 226–27. This would allow for automating the opening and closing of the lid based sensing on nearby movement. Ex. 1008 at [0005], [0042]. A POSITA would have recognized that Koda and Yang '532 are merely foot power and motorized variations of the same basic design of a trash can that has a lid and trim. Ex. 1003 ¶ 227. Both foot-powered and motorized, battery-powered variations of power transmission devices of trash cans were commercially available. Ex. 1007 at [0005]–[0006]; Ex. 1008 at [0005]. A POSITA would have been motivated to make motorized, battery-powered variations of trash cans as was the commercial norm to appeal to consumers desiring trash cans with automated lids because automated lids require less manual labor. Ex. 1008 [0005]; Ex. 1003 ¶ 227. Thus, this claim would have been obvious to a POSITA.

XII. THE BOARD SHOULD NOT DENY INSTITUTION UNDER § 325(D)

The Board should not deny institution under 35 U.S.C. § 325(d). In *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, the PTAB denied

institution under Section 325(d) after evaluating the petition under a two-part test:

- 1) whether the petition presents to the Office the same or substantially the same art or arguments previously presented to the Office; and,
- 2) if either condition is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to patentability of the challenged claims.

IPR2019-01469, Paper 6 (PTAB Feb. 6, 2020) (precedential). As part of this analysis, the Board considers the non-exclusive *Becton, Dickinson* factors:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination [or any proceeding];
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination [or any proceeding];
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential); *Advanced Bionics* at 10.

Part 1 of the *Advanced Bionics* test favors institution. Although the face of the

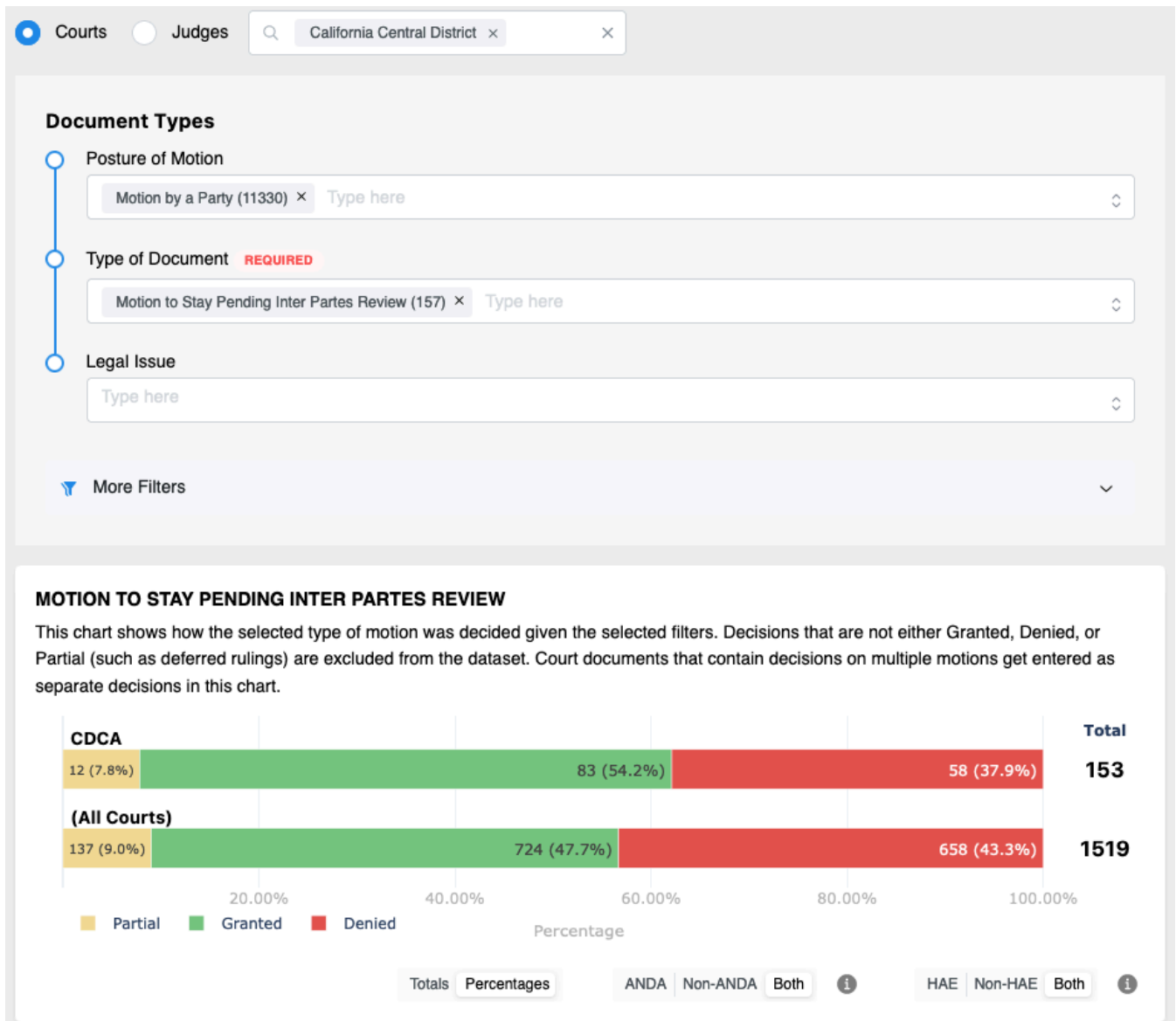
'165 patent lists Yang '865, Miller, and the Pat. 8,569,980 that ultimately issued from Yang '532, the specific combinations of references used in the grounds of this Petition were never cited in any office action. Neither examiner issued a rejection using Yang '865 or Koda as the primary reference. Neither examiner considered the multiple possible interpretations of “trim member” in Koda. *See* Section X(A) above. In fact, Examiner Luo did not issue any rejection at all when examining the application that issued as the '165 Patent. P-TACTS shows no other IPR's against this patent, so no other petitioner has made similar arguments yet. There arguments presented herein are matters of first impression.

Part 2 of the *Advanced Bionics* test favors institution. Although the record shows that Examiner Castillo carefully searched for and considered the prior art when examining the parent application, Examiner Luo took over prosecution of the '165 Patent. *See* Section IV(B)-(C) (summarizing prosecution history). Examiner Luo conducted one prior art search on October 8, 2019, from about 3 pm to 7 pm, including a giant “OR” search for all 653 references listed in IDS's, before signing all IDS's that same day. Ex. 1002 at 235-69. Examiner Luo could not have meaningfully reviewed 653 references in one afternoon. Examiner Luo allowed the claims without issuing any rejection, even though the independent claims in the '165 Patent broadened the claims and no longer included the features that Examiner Castillo previously found allowable. The disagreement between the examiners deserves the Board's attention.

XIII. THE BOARD SHOULD NOT DENY UNDER *FINTIV*

The *Fintiv* factors are: 1) whether the court granted a stay, or evidence exists that one may be granted if a proceeding is instituted; 2) a comparison of the district court trial date to the Board's statutory deadline; 3) an investment in the district court proceedings; 4) overlap between issues raised in the petition and in the parallel proceeding; 5) overlapping parties; and 6) other considerations. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 13-14 (PTAB Mar. 20, 2020) (precedential).

Factor 1—whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted—favors institution. Litigation is pending in the Central District of California, where 54% of motions to stay pending IPR have been granted.

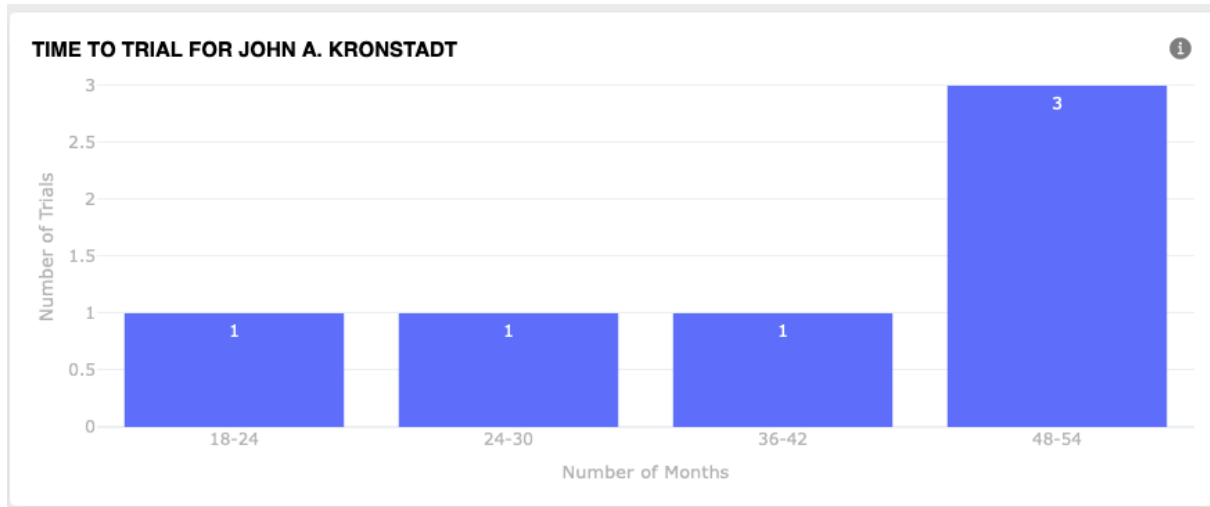


Docket Navigator Motion Success Report (September 2023)

Given the early stage of this case, the Court will more likely than not grant a motion to stay pending IPR.

Factor 2—a comparison of the district court trial date to the Board’s statutory deadline—favors institution. Patent Owner filed its case on March 24, 2023. Judge Kronstadt issued a schedule with a motions deadline of May 13, 2024, but no trial

date. Ex. 1010. Docket Navigator shows that most of his cases take 36-54 months to get to trial, well after a final written decision is expected to issue.



Docket Navigator Time to Jury Trial for John A. Kronstadt (September 2023)

Factor 3—investment in the district court proceedings—favors institution. “[I]f at the time of the institution decision, the district court has issued substantive orders related to the patent at issue, this fact favors denial.” *Fintiv* at 9–10. Here, the Court has not issued any substantive decisions. The *Markman* hearing has yet to occur. The parties’ final contentions will not be due until January and February 2024. Ex. 1010. “This investment factor is related to the trial date factor,” so for the explained for factor 2, the parties will likely not begin preparing for trial anytime soon. *Fintiv* at 10. Moreover, this Petition was prepared and is being filed just shortly after the Patent Owner presented their proposed claim constructions on August 25, 2023. This Petition relies on Patent Owner’s proposed constructions (especially for

“trim member”), so it could not have been filed earlier.

Factor 4—overlap between issues raised in the petition and in the parallel proceeding—favors institution. Petitioner hereby makes a *Sotera* stipulation that it will not pursue in the district court litigation any ground raised or that could have been reasonably raised in this IPR. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 13–14, 18–19 (PTAB Dec. 1, 2020) (precedential).

Factor 5—same parties—is neutral because the same parties are involved in the litigation.

The final *Fintiv* factor considers the merits and other circumstances. Grounds 1-5 present compelling evidence of patentability. On June 21, 2022, Director Vidal issued an interim procedure for applying the *Fintiv* factors. (“Interim Procedure”), available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf. The Interim Procedure instructs that “the PTAB will not deny institution of an IPR ... under *Fintiv* (i) when a petition presents compelling evidence of unpatentability . . . or (iii) where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.” Interim Procedure 9. Petitioner presents compelling evidence in the Grounds above and has made a *Sotera* stipulation. Both of these have been met, so the Board should not exercise its discretion under *Fintiv*.

XIV. CONCLUSION

Petitioner respectfully requests that the Board institute IPR and enter a final written decision finding the challenged claims unpatentable.

XV. FEE PAYMENT

Petitioner authorizes Account No. 60-6266 to be charged for any payment or refund.

XVI. MANDATORY NOTICES UNDER § 42.8(A)(1)

A. Real Party-In-Interest under § 42.8(b)(1)

The Petitioner is Volume Distributors, Inc.

B. Related Matters under § 42.8(b)(2)

Petitioner notes the following proceedings that may affect, or be affected by, a decision in this proceeding: Simplehuman, LLC v. Volume Distributors, Inc., 2-23-cv-02219 (CDCA Mar. 24, 2023)

C. Lead and Back-Up Counsel under § 42.8(b)(3)

Petitioner provides the following designation of counsel.

Lead Counsel	Back-Up Counsel
Qi (Peter) Tong (Reg. No. 74,292) Russ August & Kabat 12424 Wilshire Blvd., 12th Floor Los Angeles, CA 90025 Phone: (310) 826-7474 Fax: (310) 826-6991 ptong@raklaw.com rak_volumedistributors@raklaw.com	James Milkey (Reg. No. 79,503) Larry Russ (to be admitted <i>PHV</i>) Paul Kroeger (to be admitted <i>PHV</i>) Russ August & Kabat 12424 Wilshire Blvd., 12th Floor Los Angeles, CA 90025 Phone: (310) 826-7474 Fax: (310) 826-6991 lruss@raklaw.com pkroeger@raklaw.com rak_volumedistributors@raklaw.com

D. Service Information

Petitioner consents to electronic service at the emails listed above, along with rak_volumedistributors@raklaw.com.

Respectfully Submitted,

Date: October 16, 2023

/ Qi Tong /

Qi Tong (Reg. No. 74,292)
 RUSS AUGUST & KABAT
 4925 Greenville Avenue, Suite 200
 Dallas, TX 75206
 (310) 826-7474

Attorney for Petitioner

CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), I certify that this petition complies with the type-volume limits of 37 C.F.R. § 42.24(a)(1)(i) because it contains 13,634, according to the word-processing system used to prepare this petition, excluding the parts of this petition that are exempted by 37 C.F.R. § 42.24(a) (including the table of contents, a table of authorities, mandatory notices, a certificate of service or this certificate word count, appendix of exhibits, and claim listings).

Date: October 16, 2023

/ Qi Tong /

Qi Tong (Reg. No. 74,292)
RUSS AUGUST & KABAT
4925 Greenville Avenue, Suite 200
Dallas, TX 75206
(310) 826-7474

Attorney for Petitioner

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Sections 42.6 and 42.105, that a complete copy of the attached **PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 10,683,165 B2**, including all exhibits (**Nos. 1001-1014**) and related documents, are being served via Priority Mail Express on the 16th day of August, 2023, the same day as the filing of the above-identified document in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon Patent Owner by serving the correspondence address of record with the USPTO as follows:

Knobbe, Martens, Olson & Bear LLP

2040 Main Street, 14th Floor

Irvine, CA 92614

Additionally, an electronic copy will be served today on counsel of record in *simplehuman, LLC v. Volume Distributors, Inc.*, 2-23-cv-02219 (CDCA): ali.razai@knobbe.com, Matt.bellinger@knobbe.com, brandon.smith@knobbe.com, Nicholas.zovko@knobbe.com, and ben.anger@knobbe.com.

Date: October 16, 2023

/ Qi Tong /

Qi Tong (Reg. No. 74,292)
RUSS AUGUST & KABAT
4925 Greenville Avenue, Suite 200
Dallas, TX 75206
(310) 826-7474

Attorney for Petitioner