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Paper 9
Entered: March 9, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENERAL PLASTIC INDUSTRIAL CO., LTD.,
Petitioner

v.

CANON INC.,
Patent Owner

Case IPR2015-01954
Patent 8,909,094 B2

Before JAMESON LEE, THOMAS L. GIANNETTI, and HUNG H. BUI, *Administrative Patent Judges.*

BUI, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

On September 25, 2015, General Plastic Industrial Co., Ltd. ("Petitioner") filed a Petition pursuant to 35 U.S.C. § 311 and 37 C.F.R. § 42.1 to institute *inter partes* review of claims 1, 7–9, 11, 16–18, 29 and 38 of U.S. Patent No. 8,909,094 B2 (Ex. 1001, "the '094 patent"). Paper 2 ("Pet."). Canon Inc. ("Patent Owner") filed a Preliminary Response on December 22, 2015. Paper 10 ("Prelim. Resp.").

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

Upon consideration of the arguments and evidence presented by Petitioner and Patent Owner, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of any one of claims 1, 7–9, 11, 16–18, 29, and 38 of the '094 patent. For reasons discussed below, we deny the Petition as to all challenges.

B. Related Matters

Petitioner indicates that the '094 patent was the subject of an ITC Investigation: *In the Matter of Certain Toner Supply Containers and Components Thereof*, Inv. No. 337-TA-960 (U.S. Int'l Trade Comm'n).

C. The ’094 Patent

The ’094 patent describes a toner supply container for use in an electro-photographic image forming apparatus, such as a copier or a printer. Ex. 1001, 1:26–36, claims 1, 7–9, 11, 16–18, 29, and 38.

Figure 3 of the ’094 patent illustrates such a toner supply container (toner bottle) relative to a copier, as reproduced below with additional markings, inserted in red, for illustration.

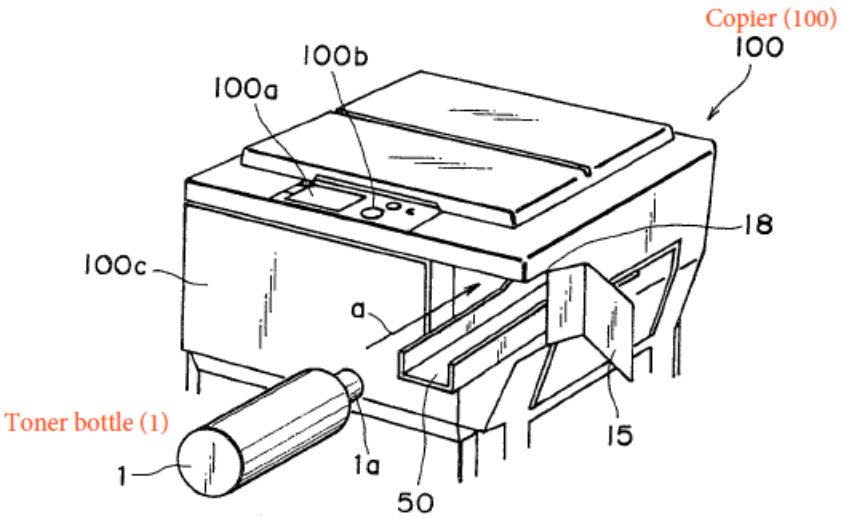


Figure 3 depicts toner supply container (toner bottle) 1 relative to copier 100.

As shown in Figure 3, toner supply container (toner bottle) 1 is installed in copier 100 by inserting the same in the direction indicated by arrow (a). Ex. 1001, Fig. 3.

Figure 8 provides a perspective view of toner bottle 1, as reproduced below with additional markings, in red, for illustration.

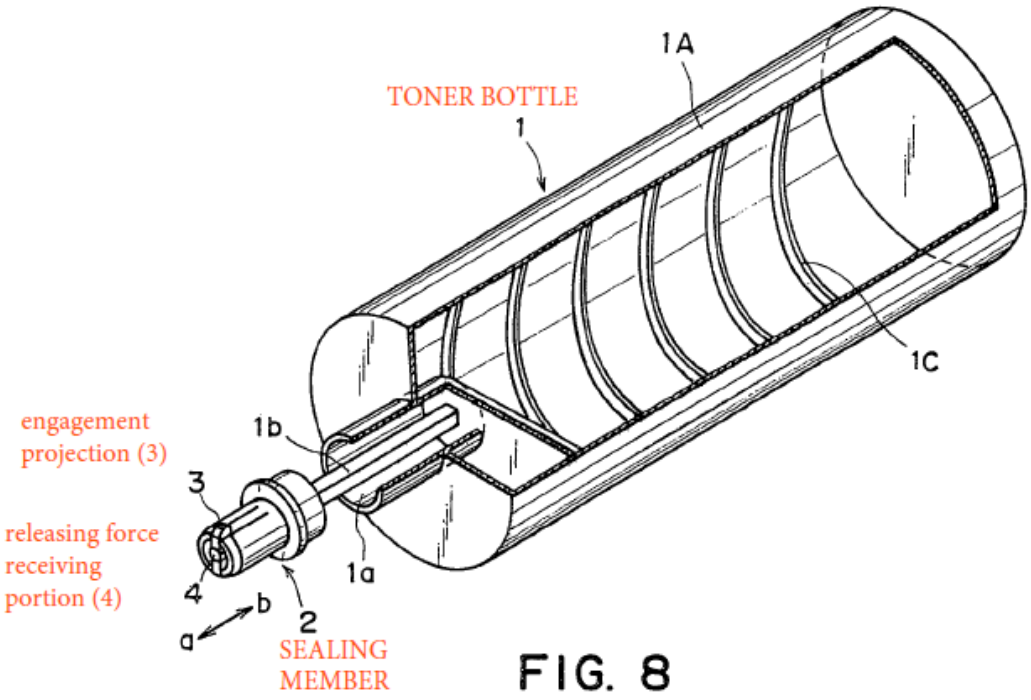


FIG. 8

Figure 8 depicts a perspective view of toner bottle 1 including sealing member 2.

As shown in Figure 8, toner bottle 1 is provided with two main components: (1) rotatable container body 1 provided with an opening 1a at one end through which toner may flow, and (2) sealing member 2. *Id*. at 9:37–39. Opening 1a is plugged with sealing member 2 for sealing opening 1a of toner bottle 1. Opening 1a is unsealed and resealed by the sliding motion of sealing member 2 relative to toner bottle 1 in the longitudinal direction (arrow a ←→ b) of toner bottle 1. *Id*. at 9:41–47.

Opening 1a is sealed, via sealing member 2, when toner bottle 1 is outside copier 1. *Id*. When toner bottle 1 is installed in copier 100, shown in Figure 1, two things happen: (1) opening 1a is unsealed; and (2) when

copier 100 is being used, toner bottle 1 is rotated. *Id.* at 7:24–8:54. The rotation of toner bottle 1 causes the toner to be fed out of opening 1a and into a toner hopper (not shown) within copier 100 when container body 1 is rotated. *Id.* at 9:64–10:37, Fig. 8.

According to the '094 patent, sealing member 2 performs the following functions: (1) sealing opening 1a of toner bottle 1, (2) receiving the rotational driving force from a main assembly of copier 100, and (3) transmitting the rotational driving force to toner bottle 1. *Id.* at 8:37–41.

The challenged claims are directed to the embodiment of sealing member 2, shown in Figures 23A–23B, which are reproduced below with additional markings, in red.

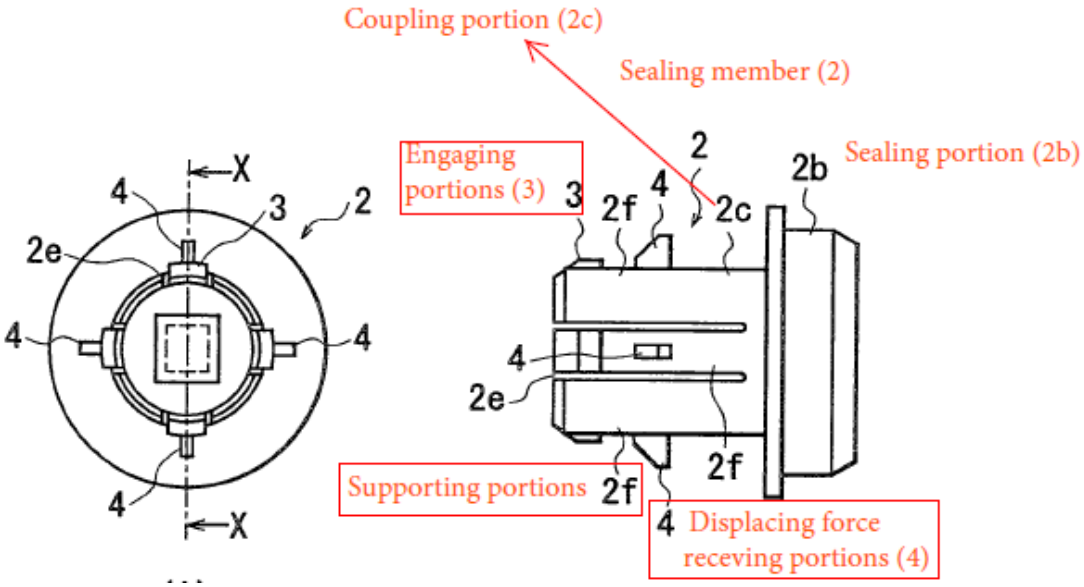


Fig. 23A Fig. 23B

Figure 23A shows a side view of sealing member 2, while Figure 23B shows a front view of sealing member 2.

As shown in Figures 23A–23B, sealing member 2 has two main components: (1) sealing portion 2b, and (2) coupling portion 2c. *Id.* at 11:21–25. Sealing portion 2b fits snugly within opening 1a in order to seal the toner within toner bottle 1. *Id*. at 11:28–30. Coupling portion 2c is engageable with a main assembly of copier 100 in order to (1) move sealing member 2 and toner bottle 1 relatively away from each other to unseal opening 1a of toner bottle 1, and (2) receive rotational drive force from copier 100, via hollow cylinder driving portion 20 driven by a motor (not shown) and provided in the main assembly of copier 100. *Id*. at 11:31–12:18.

Coupling portion 2c includes three sub-components: (1) supporting portions 2f, (2) engaging portions 3, and (3) releasing force receiving portions 4, as shown in Figures 23A–23B. These sub-components are integrally molded (*id*. at 13:49–52, 14:26–28) and are constructed as follows:

(1) Supporting portions 2f, which are not labeled but are shown in Figure 13, are elastically displaceable in an inward direction and elastically restorable in an outward direction. *Id*. at 11:63–65, 12:57–13:7, 13:40–64, 18:28–32, claims 1, 11, 29, 38, Fig. 13.

(2) Engaging portions (a.k.a., projections) 3 are provided at the free ends of supporting portions 2f and displace inwardly and outwardly along supporting portions 2f. Each engaging portion 3 also has two sub-portions: (2a) rotational force receiving portion 3a for receiving the rotational driving

force from the main assembly of copier 100; and (2b) locking portion 3b for snap-fit type locking of sealing member 2 into the main assembly of copier 100, as shown in Figures 12 and 13. *Id*. at 11:63–65, claims 1, 11, 29, 38, Figs. 12–13.

(3) Releasing (a.k.a. "displacing") force receiving portions 4 lie between engaging portions 3 and sealing portion 2, *i.e.*, they are closer to container body 1 than are engaging portions 3. Each of displacing force receiving portions 4 extends radially outwardly to a greater extent than the radially outermost part of each engaging portion 3, as shown in Figure 13. *Id*. at 18:33–36, claims 1, 11, 29, 38, Fig. 13.

Figures 12 and 13 are reproduced below with additional markings, in red.

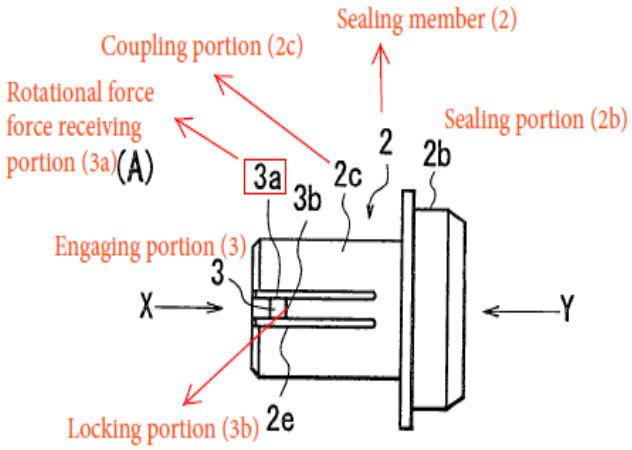


Fig. 12

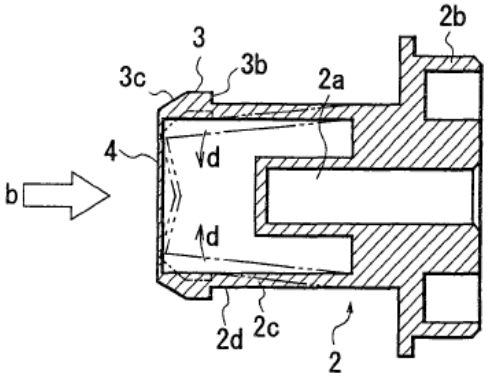


Fig. 13

Figure 12 shows a side view of sealing member 2, while Figure 13 shows engaging portions 3 of sealing member 2 elastically deformed to engage with a main assembly of copier 100.

As shown in Figures 12 and 13, engaging portions 3 of sealing member 2 perform three different functions: (1) a coupling function for receiving the rotational driving force from the main assembly of copier 100; (2) a transmitting function for transmitting the rotation to toner bottle 1; and (3) a locking function for permitting relative sliding motion between sealing member 2 and the main body of toner bottle 1 so as to automatically open and close opening 1a. *Id*. at 12:11–18.

Coupling portion 2c of sealing member 2 is to be engaged with a main assembly of copier 100 referred to as "hollow cylindrical driving portion 20." *Id*. at 7:31–34, 9:58–60. An example of such hollow cylindrical driving portion 20 provided in the main assembly of copier 100 is depicted in the left-hand portion of Figure 14, which is reproduced below with additional markings, in red.

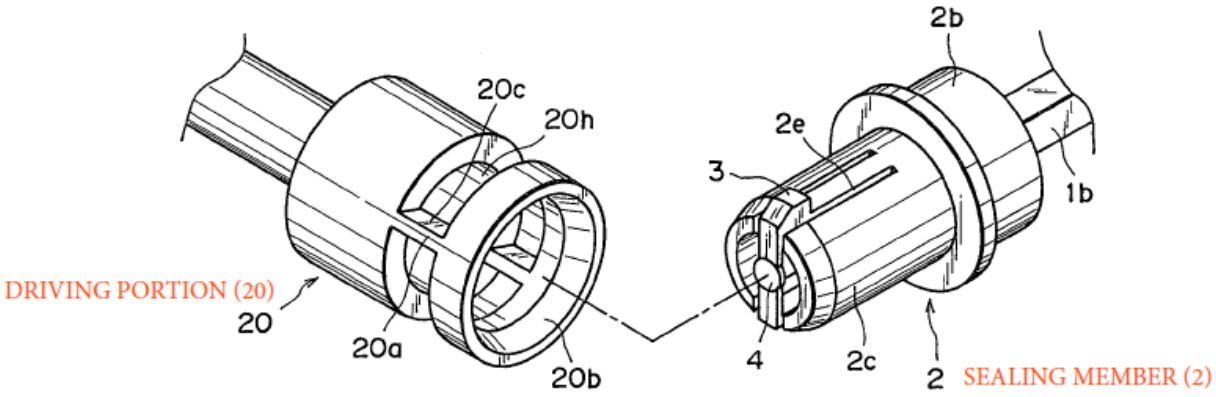


Fig. 14

Figure 14 shows how sealing member 2 of toner bottle 1 is driven to rotate, via hollow cylindrical driving portion 20 provided in the main assembly of copier 100.

As shown in Figure 14, hollow cylindrical driving portion 20 (part of copier 100, and not part of toner bottle 1) contains locking slot 20h that extends in a circumferential direction. *Id*. at 14:29–32. Slot 20h is interrupted by a pair of ribs 20a, which are spaced approximately 180 degrees apart. A motor (not shown) within copier 100 rotates driving portion 20. *Id*. at 7:35–38. Driving portion 20 (part of copier 100), in turn, rotates toner bottle 1 through the abutment of one or both ribs 20a, via one or more engaging portions 3 of sealing member 2. *Id*. at 14:41–45.

When toner bottle 1 is installed in copier 100, supporting portions 2f of sealing member 2 first elastically displace inwardly so that coupling portion 2c of sealing member 2 can enter driving portion 20 (part of the copier 100), and then elastically restore outwardly (that is, back to their original position) so that engaging portions 3 can engage with slot 20h through the abutment of one or both ribs 20a in driving portion 20 provided in the main assembly of copier 100. *Id.* at 12:57–13:7, 18:28–32.

To remove toner bottle 1 from copier 100, engaging portions 3 of sealing member 2 are disengaged from slot 20h in driving portion 20 (part of copier 100) and sealing portion 2b of sealing member 2 is resealed within opening 1a of toner bottle 1. *Id*. at 18:64–19:15, Figs. 25B–25C.

D. Illustrative Claim

Of the challenged claims, claims 1, 11, 29, and 38 are independent. Claims 7–9 depend, directly or indirectly, from claim 1. Claims 16–18 depend, directly or indirectly, from claim 11. Challenged claim 1 is

illustrative and is reproduced below:

> 1. A toner supply container comprising:
> i) a container body configured to contain toner and rotatable about an axis thereof, the container body including a cylindrical portion and an opening provided at one axial end portion thereof and configured to permit discharge of the toner contained in the container body; and
> ii) a sealing member provided at the one axial end portion of the container body, the sealing member being movable relative to the container body in an axial direction of the container body, the sealing member including:
> ii-i) a sealing portion provided at a side adjacent the container body and configured to seal the opening when the sealing member and the container body are in a first position relative to one another, the opening becoming unsealed by relative movement of the sealing member and the container body away from one another from the first position to a second position relative to one another; and
> ii-ii) a coupling portion provided at a side remote from the container body and configured and positioned to receive a rotational drive force for rotating the sealing member and the container body about the rotation axis of the container body, the coupling portion including:
> ii-ii-i) a supporting portion provided on the sealing portion, the supporting portion being elastically displaceable in an inward direction toward the rotation axis of the container body and elastically restorable in an outward direction away from the rotation axis of the container body;
> ii-ii-ii) an engaging portion provided at a free end of the supporting portion and being displaceable with the supporting portion, the engaging portion including:
> ii-ii-ii-i) a rotational force receiving portion capable of being abutted in a direction that is concentric with a circumference of the cylindrical portion of the container body to receive a rotational drive force for rotating the sealing member

> and the container body; and
>
> ii-ii-ii-ii) a locking portion capable of being abutted in a direction parallel to the rotation axis of the container body to enable the relative movement of the sealing member and the container body from the first position, in which the opening is sealed, to the second position, in which the opening is unsealed; and
>
> ii-ii-iii) a displacing force receiving portion provided on the supporting portion at a position closer to the container body than the engaging portion, the displacing force receiving portion being displaceable with the supporting portion and having a radially outermost part that is more remote from the rotation axis of the container body than a radially outermost part of the engaging portion,
>
> wherein the supporting portion, the engaging portion, and the displacing force receiving portion are integrally molded.

Ex. 1001, 24:15–25:5.

Claim 11 is substantially identical to claim 1, except that "at least two supporting portions provided on the sealing member" are recited in claim 11 instead of "a supporting portion provided on the sealing member" recited in claim 1. Ex. 1001, 25:61–67. Similarly, claims 29 and 38 are substantially identical to claim 1, except that "a projecting portion" is recited in those claims instead of "a displacing force receiving portion" recited in claim 1. Ex. 1001, 28:36–44, 29:46–55. Claim 38 also recites "at least two supporting portions provided on the sealing member" instead of "a supporting portion provided on the sealing member" recited in claim 1. Ex. 1001, 29:36–42.

E. Evidence Relied Upon

Petitioner relies on the following prior art reference:

Reference		Date	Exhibit
Matsuoka	U.S. Patent No. 5,903,806	May 11, 1999	Ex. 1006

Petitioner further relies on the testimony of Dr. Brian Springett. Ex. 1007.

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Challenged Claims	Basis	References
1, 8, 9, 11, 17, 18, 28, and 38	§ 102(b)	Matsuoka
1, 7–9, 11, 16–18, 29, and 38	§ 103(a)	Matsuoka

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1281–1282 (Fed. Cir. 2015), *cert. granted sub nom. Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (mem.) (2016). Even under the rule of broadest reasonable interpretation, claim terms are given their ordinary and customary meaning,

as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner and Patent Owner have proposed constructions for several claim terms. *See* Pet. 17–22; Prelim. Resp. 19–31. At this stage of the proceeding, neither party has identified a term for construction that is dispositive on any of the challenges. For the purposes of this Decision, and on this record, we determine that no claim term needs express construction and claim terms proposed by Petitioner will be given their ordinary and customary meaning. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only those terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy).

B. Legal Standard for 35 U.S.C. §§ 102(b) & 103(a)

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Obviousness is determined on the basis of underlying factual inquiries, including: (1) the scope and content of the prior art; (2) differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). A patent claim is unpatentable under 35 U.S.C. § 103 if *the differences* between the claimed

subject matter and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). However, a conclusion of obviousness "cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

For this decision, we determine that no express finding on the level of ordinary skill in the art is necessary, and that the level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

C. *Alleged Anticipation of Claims 1, 8, 9, 11, 17, 18, 29, and 38 based on Matsuoka*

Petitioner contends that claims 1, 8, 9, 11, 17, 18, 29, and 38 are anticipated by Matsuoka under 35 U.S.C. § 102(b). Pet. 23–56. To support its contention, Petitioner provides a claim chart and detailed explanations as to how Matsuoka allegedly meets each claim limitation. *Id*. at 34–56. Petitioner also relies upon the Springett Declaration. Ex. 1007.

We have considered Petitioner's analysis and supporting evidence, as well as Patent Owner's arguments presented in the Preliminary Response

(Prelim. Resp. 33–41), and are not persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail on this challenge.

(1) Matsuoka: Exhibit 1006

Matsuoka discloses developing agent (toner) replenishing apparatus 40 (part of copier) and toner cartridge (toner supply container) 30, as shown in Figures 3, 4(a), 4(d), 5(a), 6, 9(a)–7(b), 10(b) and 11. Ex. 1006, Abstract.

Matsuoka's Figure 3 shows a copier's developing agent replenishing apparatus 40 including multiple toner cartridges 30, as reproduced below with additional markings, in red, for illustration.

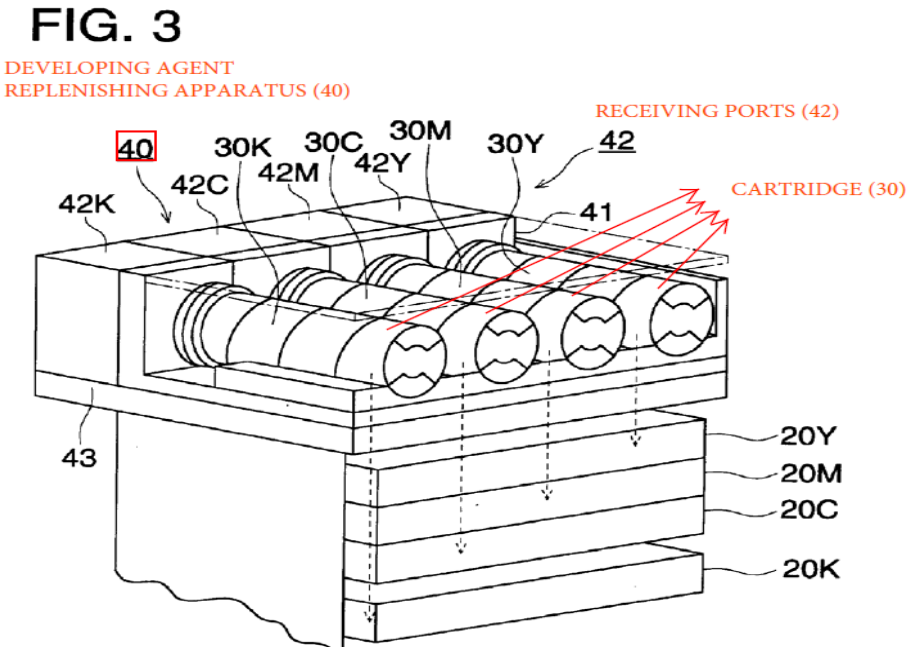
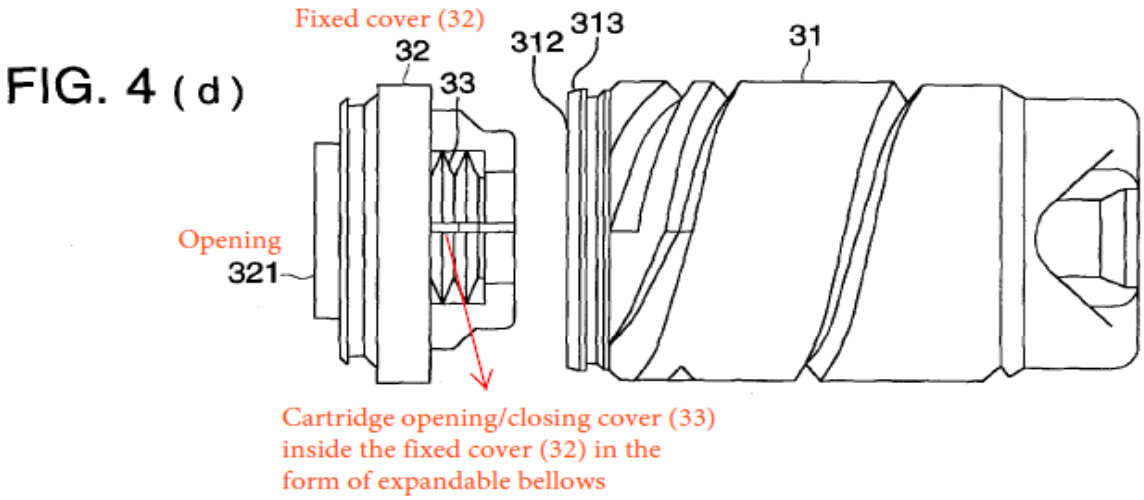


Figure 3 of Matsuoka depicts copier's developing agent replenishing apparatus 40 including multiple toner cartridges 30.

As shown in Figure 3, multiple toner cartridges 30 (Y, M, C and K) are inserted into a copier's developing agent replenishing apparatus 40, via receiving ports 42. Ex. 1006, 7:1–14.

Matsuoka's Figure 4(d) shows each toner cartridge 30, as reproduced below with additional markings, in red.



Matsuoka's Figure 4(d) depicts each toner cartridge 30 usable in copier's developing agent replenishing apparatus 40.

As shown in Figure 4(d), each toner cartridge 30 includes two main components: (1) container main body 31 provided with opening 312, and (2) fixed cover 32 "which is fixed solidly with opening 312 of the container main body 31" and includes opening/closing cover 33 "which is engaged inside the fixed cover 32" in the form of expandable/compressible bellows. *Id*. at 7:22–30.

Matsuoka's Figure 6 shows toner cartridge 30 inserted into the copier's developing agent replenishing apparatus 40, via receiving port 42,

and rotated by rotary power transmitting member 44 within the copier's developing agent replenishing apparatus 40, as reproduced below with additional markings, in red.

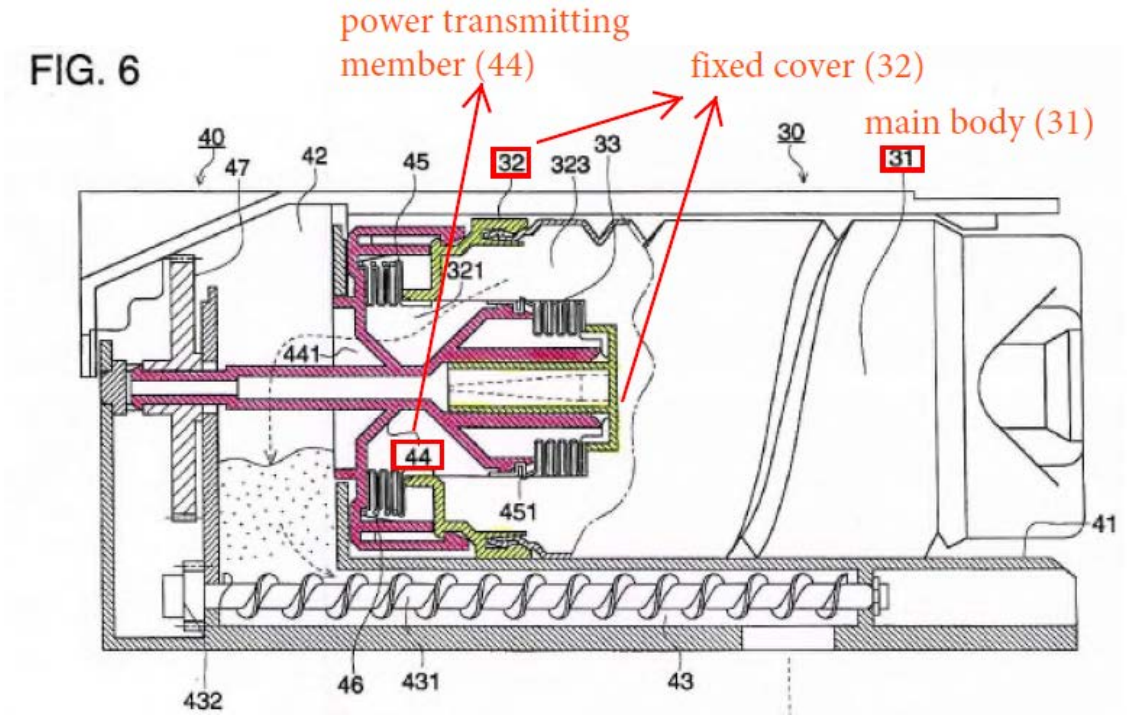


Figure 6 of Matsuoka depicts toner cartridge 30 inserted in copier's developing agent replenishing apparatus 40 and its fixed cover 32 (highlighted in yellow) engaged with rotary power transmitting member 44 (highlighted in red) within developing agent replenishing apparatus 40.

As shown in Figure 6, when toner cartridge 30 is inserted into the copier's developing agent replenishing apparatus 40, bellows of opening/closing cover 33 and opening/closing cover 45 are compressed, creating replenishment opening 321 for toner to be dispensed. Toner cartridge 30 is rotated by rotary power transmitting member 44 within developing agent replenishing apparatus 40 to dispense toner through

opening 321. *Id*. at 8:5–7, 33–37; *see also id*. at 8:45–50 (explaining how portions within the rotary power transmitting member 44 also "engage on a detachable basis" with a portion within fixed cover 32 of toner cartridge 30).

(2) Analysis of Anticipation

Each of independent claims 1, 11, 29, and 38 recites a "toner supply container" comprising two main components: (i) a container body, and (ii) a sealing member provided at an axial end of the container body with a specific configuration, shown in Figs. 23A–23B of the '094 patent. Ex. 1001, 24:15–24. That "sealing member" includes: (ii-i) "a sealing portion," and (ii-ii) "a coupling portion" which, in turn, includes: (ii-ii-i) "a supporting portion," (ii-ii-ii) "an engaging portion," and (ii-ii-iiii) "a displacing force receiving portion" with several corresponding functions. Ex. 1001, 24:24–25:5.

Petitioner contends that the "sealing member" recited in the challenged claims as part of the "toner supply container" is met by what Petitioner refers to as "Matsuoka's integrally combined fixed cover 32 and rotary power transmitting member 44." Pet. 23–27 (citing Matsuoka's Figs. 6, 7(a)–7(b)). Matsuoka's fixed cover 32 is a part of Matsuoka's toner cartridge 30, and Matsuoka's rotary power transmitting member 44 is a fixed part of Matsuoka's copier's developing agent replenishing apparatus 40. Petitioner argues that when Matsuoka's toner cartridge 30 is inserted into the copier's developing agent replenishing apparatus 40 with rotary power transmitting member 44 engaged with fixed cover 32 of Matsuoka's toner cartridge 30, "Matsuoka's integrally combined fixed cover 32 and rotary

power transmitting member 44" can be considered as a part of Matsuoka's toner cartridge 30. Pet. 25, 27, 34, 40, 47, 51.

Patent Owner responds that: (1) Matsuoka's toner cartridge 30 does not include rotary power transmitting member 44; and (2) because rotary power transmitting member 44 is a fixed part of Matsuoka's copier's developing agent replenishing apparatus 40, Matsuoka's rotary power transmitting member 44 cannot be integrally combined with fixed cover 32 and cannot be considered as a part of Matsuoka's toner cartridge 30. Prelim. Resp. 33–36 (citing Ex. 1005, Fig. 6, 7:53–8:7).

We agree with Patent Owner. Matsuoka's toner cartridge 30, shown in Figure 4(a), contains only two main components: (1) container main body 31 provided with opening 312, and (2) fixed cover 32 including opening/closing cover 33 "which is engaged inside the fixed cover 32" in the form of expandable/compressible bellows. Ex. 1006, 7:22–30, Fig. 4(d). As recognized by Patent Owner, Matsuoka's toner cartridge 30 does not include rotary power transmitting member 44. Prelim. Resp. 34 (citing Ex. 1005, Fig. 6, 7:53–8:7).

Fixed cover 32 and rotary power transmitting member 44, as shown in Figure 4(d) and Figure 6 of Matsuoka, are separate, distinct components from two different apparatuses, i.e., Matsuoka's toner cartridge 30 and Matsuoka's copier's developing agent replenishing apparatus 40. Fixed cover 32 and rotary power transmitting member 44 are merely engageable "on a detachable basis" only when Matsuoka's toner cartridge 30 is inserted into a copier's developing agent replenishing apparatus 40. *Id*. at 35 (citing

Ex. 1006, 7:38–56, 8:5–7, 33–37, 45–50). Even when engaged with toner cartridge 30, rotary power transmitting member 44 remains a part of Matsuoka's copier's developing agent replenishing apparatus 40, and does not become a part of Matsuoka's toner cartridge 30. *Id*. at 36.

On this record, we are not sufficiently persuaded that Matsuoka's "integrally combined fixed cover 32 and rotary power transmitting member 44" can be said to meet the "sealing member" recited in the challenged claims as a part of the "toner supply container."

Even if Matsuoka's alleged "integrally combined fixed cover 32 and rotary power transmitting member 44" can be said to meet the "sealing member" limitation of the challenged claims, the challenged claims also require the "sealing member" to include:

> "a sealing portion provided at a side adjacent the container body and configured to seal the opening when the sealing member and the container body are in a first position relative to one another, *the opening becoming unsealed by relative movement of the sealing member and the container body away from one another* from the first position to a second position relative to one another."

Ex. 1001 at 24:25–32, 25:47–54, 28:15–22, 29:24–31 (emphasis added).

Petitioner argues the "sealing portion" recited in the challenged claims is met by Matsuoka's fixed cover's opening/closing cover 33. Pet. 27–29 (citing Ex. 1006, Fig. 7(a)). According to Petitioner, fixed cover's opening/closing cover 33 seals opening 312 in Matsuoka's toner cartridge 30, in a first position, shown in Figure 10(b), and is compressed to unseal or

form opening 321 in Matsuoka's toner cartridge 30, in a second position, shown in Figure 11. *Id*. at 28–29 (citing Ex. 1006, 9:28–47, 50–54).

Patent Owner responds that the "sealing portion" recited in each of independent claims 1, 11, 29, and 38 is not met by Matsuoka's fixed cover's opening/closing cover 33. According to Patent Owner, Matsuoka's toner cartridge's opening 321 is unsealed by relative movement of part of the alleged "sealing member" (rotary power transmitting member 44) *toward* the "container body" (cartridge 30 having container main body 31), which is the opposite of what the challenged claims require. Prelim. Resp. 37–40.

We agree with Patent Owner. At the outset, we note the challenged claims require that the container's opening becomes unsealed by relative movement of the sealing member and the container body *away* from each other. As explained by Patent Owner, this relative movement is illustrated, for example, in Figures 7(B) and 7(C) of the '094 patent, which show how opening 1a is unsealed by the relative movement of toner bottle main body 1a away from sealing member 2, specifically, by moving toner bottle main body 1a in the direction of arrow "b" while sealing member 2 is held fixed or locked with the main assembly of copier 100. Prelim. Resp. at 37–38 (citing Ex. 1001, 9:25–32, 9:41–7, 13:8–16, 16:67–17:5); *see also* Ex. 1001, 8:9–17, 11:13–12:18, 13:8–16, 15:4–13, 18:61–19:38, Figs. 24–25A (describing the "relative movement" between sealing member 2 and toner bottle 1).

In contrast, Matsuoka's toner cartridge 30 is unsealed by advancing toner cartridge 30 with its fixed cover 32 *toward* rotary power transmitting

member 44, which causes the expandable bellows of opening/closing cover 33 to compress and unseal opening 321. Ex. 1006, 8:5–7, 33–37, 45–50; *see also* Pet. at 28–29. Thus, in Matsuoka, toner cartridge's opening 321 is unsealed by relative movement of part of the alleged "sealing member" (rotary power transmitting member 44) *toward* the "container body" (cartridge 30 having container main body 31), which is the opposite of what the challenged claims require, i.e., the container's opening becomes unsealed by relative movement of the sealing member and the container body *away* from each other. *Id*. at 39.

On this record, we are not sufficiently persuaded that Matsuoka's fixed cover's opening/closing cover 33 can be said to meet the "sealing portion" limitation of the challenged claims.

For these reasons, we are not persuaded that Petitioner has established a reasonable likelihood that claims 1, 8, 9, 11, 17, 18, 29, and 38 are anticipated by Matsuoka under 35 U.S.C. § 102(b).

D. Alleged Obviousness of Claims 1, 7–9, 11, 16–18, 29, and 38 based on Matsuoka

Petitioner argues that claims 1, 7–9, 11, 16–18, 29 and 38 would have been obvious under 35 U.S.C. §103 over Matsuoka. Pet. 16, 56–59. We understand Petitioner's argument as this: First, Matsuoka's toner cartridge 30 is alleged to include every claim limitation except for the "sealing member" of independent claims 1, 11, 29, and 38; second, assuming that Matsuoka's toner cartridge 30 cannot be deemed as including rotary power

transmitting member 44 of the copier to meet the "sealing member" limitation, toner cartridge 30 can still be made to include in its structure rotary power transmitting member 44 such that member 44 would be a part of toner cartridge 30. In particular, Petitioner, relying on Dr. Springett's testimony, argues that: (1) Matsuoka's fixed cover 32 and Matsuoka's rotary power transmitting member 44 can be combined as a single piece construction, and (2) such a single piece construction "would be merely a matter of obvious engineering choice" to a person of ordinary skill. Pet. 56–58 (citing Ex. 1007 ¶¶ 73–76).

Patent Owner responds that: (1) Petitioner fails to present an articulated reason with rational underpinnings to properly support its assertions of obviousness, and (2) Petitioner's proposed modification of Matsuoka's toner cartridge to incorporate rotary power transmitting member 44 from the copier's developing agent replenishing apparatus 40 does not render the challenged claims obvious, as the prior art does not describe certain claim limitations. Prelim. Resp. 41–45.

We agree with Patent Owner. A determination of unpatentability on a ground of obviousness must include "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418 (quoting *Kahn*, 441 F.3d at 988). Petitioner does not provide articulated reasoning with rational underpinnings as to why one of ordinary skill in the art would have been motivated to modify Matsuoka's toner cartridge 30 to incorporate rotary power transmitting member 44 from the copier's developing agent replenishing apparatus 40 in order to arrive at

the claimed subject matter. Instead, Petitioner proffers only conclusory obviousness assertions that Matsuoka's fixed cover 32 and Matsuoka's rotary power transmitting member 44 can be combined as a single piece construction. Pet. 56–57. Petitioner's obviousness arguments lack any persuasive reason why a skilled artisan would be motivated to modify Matsuoka's toner cartridge 30 to incorporate rotary power transmitting member 44 from the copier's developing agent replenishing apparatus 40.

As discussed *supra*, Matsuoka's toner cartridge 30 contains only two main components: (1) container main body 31 provided with opening 312, and (2) fixed cover 32 including opening/closing cover 33 "which is engaged inside the fixed cover 32" in the form of expandable/compressible bellows. Ex. 1006, 7:22–30, Fig. 4(d). Matsuoka's toner cartridge 30 does not include rotary power transmitting member 44, which is a fixed part of the copier's developing agent replenishing apparatus 40. Ex. 1006, Figs. 3, 4(d), 6. Fixed cover 32 and rotary power transmitting member 44 are merely engageable "on a detachable basis" when Matsuoka's toner cartridge 30 is inserted into the copier's developing agent replenishing apparatus 40, as shown in Figure 6 of Matsuoka. Ex. 1006, 7:38–56, 8:5–7, 33–37, 45–50.

In order to seal and unseal Matsuoka's toner cartridge 30, fixed cover 32 must be able to engage and disengage from rotary power transmitting member 44. *Id.* at 8:60–9:6, 9:45–54, 11:31–12:18, Figs. 23A–23B. If fixed cover 32 and rotary power transmitting member 44" were to be combined as a single piece in the manner proposed by Petitioner, we are persuaded by Patent Owner that a permanently engaged rotary power transmitting member

44 would result in a permanently unsealed cartridge, i.e., toner cartridge 30 would not be sealed and whatever toner remains in the toner cartridge 30 would scatter in the copier or soil the operator's hands, especially during removal of the toner cartridge from the copier. This is because, as a single piece construction, fixed cover 32 and rotary power transmitting member 44 are permanently attached and are no longer able to engage and disengage from each other in order to seal and unseal Matsuoka's toner cartridge 30. In his declaration, Dr. Springett testifies that Matsuoka's fixed cover 32 (part of toner cartridge) and Matsuoka's rotary power transmitting member 44 (part of copier) can be combined as a single piece, but does not explain how Matsuoka's toner cartridge 30 can be sealed and unsealed if fixed cover 32 and rotary power transmitting member 44 were a single piece. Ex. 1007 ¶¶ 72–75.

On this record, we are not sufficiently persuaded that a skilled artisan would have had a reason to modify Matsuoka's toner cartridge 30 to incorporate rotary power transmitting member 44, and that the proposed modification of Matsuoka's toner cartridge 30 would arrive at the claimed subject matter. Petitioner does not explain why Matsuoka's toner cartridge 30 would be suitable for its intended purposes if Matsuoka's toner cartridge 30 were modified to incorporate rotary power transmitting member 44 (part of copier). To the contrary, it appears that the proposed modification of Matsuoka's toner cartridge 30 to incorporate rotary power transmitting member 44 (part of the copier) would render Matsuoka's toner cartridge 30 unsuitable for its intended purposes. *In re Gordon*, 733 F.2d 900, 902 (Fed.

Cir. 1984) (if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification); *see also In re Ratti*, 270 F.2d 810, 813 (CCPA 1959) (If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.). Because the proposed modification of Matsuoka's toner cartridge 30 would likely render toner cartridge 30 unsuitable for its intended purposes, we are not persuaded that a single piece construction of Matsuoka's fixed cover 32 and rotary power transmitting member 44 would have been "a matter of obvious engineering choice" as Petitioner argues. Pet. 56–58 (citing Ex. 1007 ¶¶ 73–76).

Lastly, even if Matsuoka's toner cartridge 30 were modified to incorporate rotary power transmitting member 44 in the manner suggested by Petitioner, it appears the redesigned toner cartridge 30 would be in a permanently unsealed state, and none of the rotary power transmitting member 44, the fixed cover 32, or the opening/closing cover 33 would move relative to the container main body 31 in the manner required by the "relative movement" limitation of the challenged claims as discussed *supra*.

For these reasons, we are not persuaded that Petitioner has established a reasonable likelihood that claims 1, 7–9, 11, 16–18, 29, and 38 are unpatentable under 35 U.S.C § 103(a) as obvious over Matsuoka.

III. CONCLUSION

For the foregoing reasons, and having considered the Petition and all of the arguments presented in the Preliminary Response, we determine the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in showing the unpatentability of any one of claims 1, 7–9, 11, 16–18, 29, and 38 of the ’094 patent.

IV. ORDER

Accordingly, it is:

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

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