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Paper No. 7
Entered: November 28, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZIMMER SURGICAL, INC.,
Petitioner,

v.

STRYKER CORPORATION,
Patent Owner.

Case IPR2018-01089
Patent 9,579,428 B1

Before ERICA A. FRANKLIN, BARBARA A. PARVIS, and CHRISTOPHER C. KENNEDY, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Zimmer Surgical, Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1–6, 8, 10, 12, 14–16, 18, 20, 22–25, and 28–30 ("the challenged claims") of U.S. Patent No. 9,579,428 B1 (Ex. 1001, "the '428 Patent"). Stryker Corporation ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

We have authority under 35 U.S.C. § 314 to determine whether to institute an *inter partes* review. *See* 37 C.F.R. § 42.4(a). Upon considering the Petition and the Preliminary Response, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in showing the unpatentability of the challenged claims. Accordingly, we deny the Petition.

A. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), each party identifies judicial and administrative matters that would affect, or be affected by, a decision in this proceeding. In particular, the parties inform us that the '428 Patent is the subject of the following district court proceeding: *Zimmer Surgical, Inc., et al.* v. *Stryker Corporation et al.*, No. 16-679-RGA-MPT (D. Del.) filed September 12, 2017 ("co-pending district court proceeding"). Pet. 80; Paper 4, 2.[1] The parties additionally inform us U.S. Patent No. 7,615,037 B2 claims priority to one or more of the same applications to which the '428 Patent claims priority. Pet. 80–81; Paper 4, 2. The parties inform us that

[1] Petitioner indicates that the '428 Patent first was asserted in *Zimmer Surgical, Inc., et al. v. Stryker Corporation et al.*, No. 17-1130-RGA) (D. Del.), but Patent Owner voluntarily dismissed that proceeding without prejudice to pursue their claims in the co-pending district court proceeding.

U.S. Patent No. 7,615,037 B2 was asserted against a third party in *Stryker Corp. v. Poseidon Surgical, LLC*, No. 1:16-cv-01199 (W.D. Mich.) filed October 4, 2016. *Id.*

B. The '428 Patent

The '428 Patent is directed to a system for collecting waste generated during a surgical procedure having a removable intake manifold. Ex. 1001, 1:31–34. The '428 Patent states that known prior art systems are available for collecting waste generated during a surgical procedure, including a known system with a single use manifold. *Id.* at 1:52–61. According to the '428 Patent, a disadvantage of known systems is that waste may adhere to sides of the manifold or become trapped in the filter of the manifold and care must be taken or this waste will become uncontained waste in the surrounding environment. *Id.* at 2:31–45.

The '428 Patent indicates its new system for collecting surgical waste prevents the aforementioned problem with the prior art system. *Id.* at 1:31-37. In particular, the '428 Patent indicates that its system includes a manifold and complimentary receiver that are designed to minimize the release of uncontained fluids upon removal and replacement of the single use manifold. *Id.* at 2:67–3:6.

Figure 1 of the '428 Patent is reproduced below.

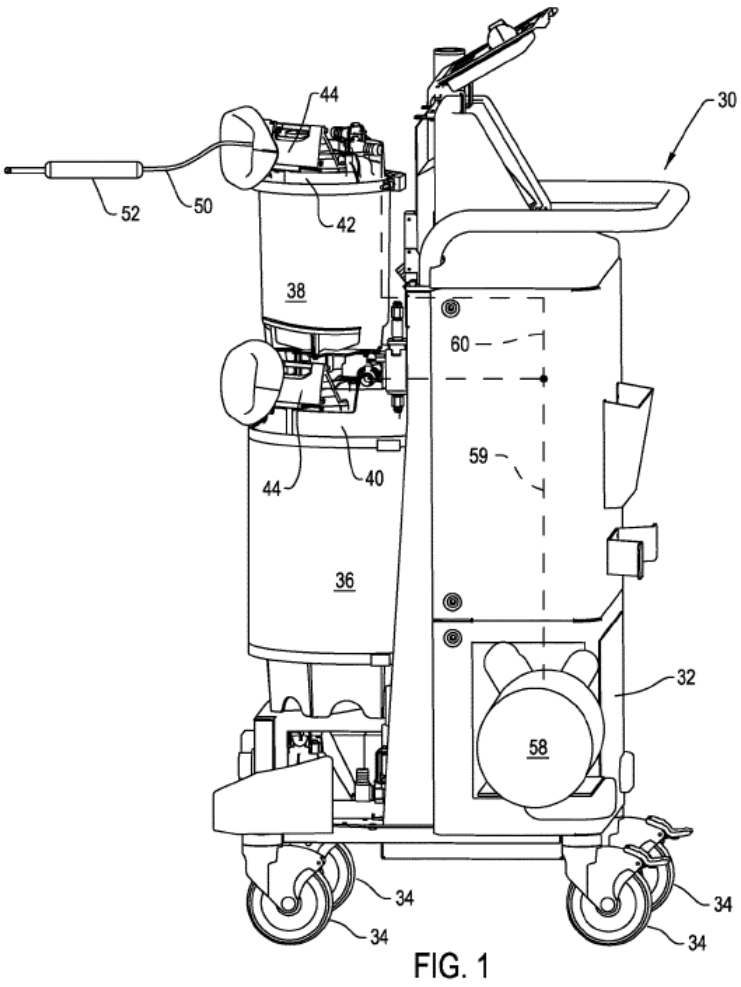


FIG. 1

Id. at Fig. 1. Figure 1 of the '428 Patent, above, illustrates medical waste collection system 30. *Id.* at 3:55–56, 4:26.

As shown in Figure 1 of the '428 Patent, system 30 includes canisters 36 and 38, each having a cap 40 and 42, respectively. *Id.* at 4:37–38. Attached to each canister cap 40 and 42 is manifold receiver 44. *Id.* at 4:39–40. Removably seated in each manifold receiver 44 is manifold 46. *Id.* at 4:40–41. Internal to each manifold receiver 44 is conduit 56, which functions as a fluid communications path from manifold 46 into canister 36 or 38. *Id.* at 4:55–58. System 30 also includes suction pump 58 that draws

matter into suction line 50, manifold 45, and manifold receiver 44 into canister 36 or 38. *Id.* at 4:59–66.

Figure 2 of the '428 Patent illustrates manifold 46 seated in manifold receiver 44 and is reproduced below. *Id.* at 3:57–58, 4:40–41.

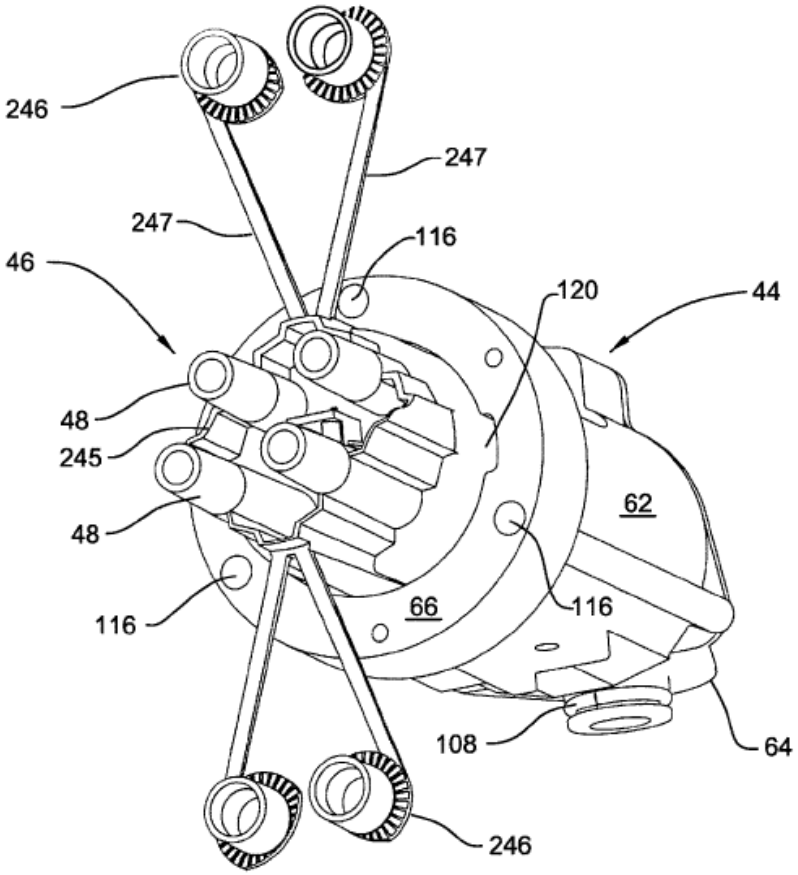


FIG. 2

Id. at Fig. 2. Figure 2 of the '428 Patent, above, illustrates a perspective view of manifold 46 removably seated in manifold receiver 44. *Id.* at 3:57–58, 4:40–41.

As shown in Figure 2, each manifold 46 is formed with multiple fittings 48. *Id.* at 4:42–43. Each fitting 48 receives one suction line 50. *Id.* at 4:43. Manifold receiver 44 has three static components including housing

62, which receives the proximal end of manifold 46; receiver adaptor 64, which holds manifold receiver housing 62 to canister cap 40 or 42; and lock ring 66, which is formed with geometric features to align properly manifold 46 into manifold receiver 44. *Id.* at 5:13–24. In particular, lock ring 66 is formed to define slots 118 and 120, which are diametrically opposed, extend radially outward from center opening 114 of lock ring 66, and extend the length of lock ring 66. *Id.* at 7:10–17. Lock ring 66 also has grooves 122, which function as slots through which tabs integral with manifold 46 travel. *Id.* at 7:18–26.

C. Illustrative Claim

Petitioner challenges claims 1–6, 8, 10, 12, 14–16, 18, 20, 22–25, and 28–30 of the '428 Patent. Pet. 3. Claims 1, 14, and 23 are independent claims. Claims 2–6, 8, 10, 12, 15, 16, 18, 20, 22, 24, 25, and 28–30 depend, directly or indirectly, from claims 1, 14, and 23. Independent claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A medical/surgical waste collection assembly, said assembly including:
>
> a manifold, said manifold including:
>
> a housing with proximal and distal ends, a longitudinal axis that extends between the proximal and distal ends and an outlet opening at the proximal end, the outlet opening being off center from the longitudinal axis of the manifold housing; and
>
> a fitting that extends from the distal end of said manifold housing, said fitting shaped to receive a suction line and being in fluid communication with the outlet opening of said manifold housing; and
>
> a waste collection unit including:
>
> a first canister for holding medical/surgical waste;

a suction pump in fluid communication with said first canister, said suction pump configured to draw a suction on said first canister; and

a first receiver adjacent said first canister, said first receiver shaped to have: a bore dimensioned to receive said manifold housing, the bore having an open distal end into which said manifold housing is inserted and having a proximal end in fluid communication with said first canister; and an axis that extends through the bore,

wherein:

said manifold housing and said first receiver are collectively configured so that said manifold housing is able to rotate in the bore of said first receiver;

said manifold and said first receiver are formed with complementary alignment features that engage when the manifold is inserted into the bore of said first receiver so as to cause the outlet opening of said manifold housing to be, upon insertion into the bore, in a specific rotational alignment in the bore; and

said first receiver is attached to said first canister so that the axis through the receiver bore is angled from the horizontal and said alignment features of said manifold and said first receiver are arranged so that, when said manifold is initially inserted into the bore of said first receiver, the outlet opening of said manifold housing is in a first rotational position about the axis through the receiver bore and, when said manifold housing is rotated in the bore, the outlet opening is in a second rotational position about the axis through the receiver bore so that the outlet opening is located below the position of the outlet opening when the outlet opening is in the first rotational position.

Ex. 1001, 21:28–22:7.

D. Evidence Relied Upon

Petitioner relies on the following references:

U.S. Patent Publication No. 2003/0164600 A1, filed March 4, 2002, published September 4, 2003 (Ex. 1005, "Dunn");

U.S. Patent No. 6,027,490, filed January 24, 1997, issued February 22, 2000 (Ex. 1006, "Radford");

U.S. Patent No. 5,419,687, filed February 28, 1994, issued May 30, 1995 (Ex. 1007, "Adahan");

U.S. Patent No. 4,737,148, filed May 14, 1986, issued April 12, 1988 (Ex. 1008, "Blake"); and

U.S. Patent No. 4,857,063, filed January 19, 1988, issued August 15, 1989 (Ex. 1009, "Glenn").

Petitioner also relies upon the Declaration of Terry N. Layton, Ph.D., who has been retained by Petitioner for the instant proceeding.
Ex. 1002 ¶ 1.

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 5):

Reference(s)	Basis	Claims Challenged
Dunn, Radford, and Adahan	§ 103(a)	1–3, 5, 6, 8, and 12
Dunn, Radford, Adahan, and Blake	§ 103(a)	4, 14, 15, and 22
Dunn, Radford, Adahan, and Glenn	§ 103(a)	10, 16, 18, 20, 23, 24, and 28–30
Dunn, Radford, Adahan, Blake, and Glenn	§ 103(a)	25

II. DISCUSSION

A. Principles of Law Relating to Obviousness

A patent claim is unpatentable 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. 35 U.S.C. § 103(a). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.[2] *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we also "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441, F.3d 977, 988 (Fed. Cir. 2006)). We analyze the ground based on obviousness in accordance with the above-stated principles.

B. Level of Ordinary Skill

Petitioner contends:

> According to Patent Owner's expert, Neil Sheehan, in a related litigation, "[a] person of ordinary skill in the art at the time of the invention of the 428 Patent would be an individual having a bachelor's degree in mechanical engineering,

[2] Patent Owner asserts that Petitioner has not addressed evidence of copying produced in the co-pending district court proceeding. Prelim. Resp. 65. We do not reach this assertion by Patent Owner in light of decision not to institute based upon the other deficiencies in the Petition discussed herein.

> biomedical engineering, industrial engineering, or similar technical degree, or equivalent work experience and five to ten years of experience in the design and development of medical products, including fluid management and vacuum systems."

Pet. 9 (citing Ex. 1010 ¶ 26). Petitioner contends it adopts Patent Owner's definition of a person of ordinary skill in the art. *Id.*

Patent Owner does not dispute Petitioner's contentions regarding level of ordinary skill or propose an alternative. *See generally* Prelim. Resp. We adopt Petitioner's proposed level for the purposes of determining whether to institute an *inter partes* review.

C. Claim Construction

1. Principles of Law Relating to Claim Construction

In this *inter partes* review, we construe claim terms in an unexpired patent 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) (2016).[3] The disputes between the parties can be resolved based on determining the broadest reasonable interpretation of only the term "below." *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017), *cert. denied*, 138 S. Ct. 1695 (April 30, 2018) (noting that "we need only construe terms 'that are in controversy, and only

[3] The claim construction standard to be employed in an *inter partes* review recently changed. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51340 (October 11, 2018). At the time of the filing of the Petition in this proceeding, however, the applicable claim construction standard was set forth in 37 C.F.R. § 42.100(b) (2016).

to the extent necessary to resolve the controversy'") (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

2. The Parties' Positions

We turn to the parties' positions regarding the broadest reasonable interpretation of the term "below." Petitioner asserts "[f]or purposes of this proceeding, Petitioner adopts a set of constructions previously advanced by Patent Owner in a related district court litigation." Pet. 10. Petitioner, more specifically, adopts the proposed construction that "below" means "[b]eneath (lower than)." *Id.* at 11.

Patent Owner agrees that the construction of "below" set forth in the Petition comports with the plain and ordinary meaning of the term. Prelim. Resp. 15. Patent Owner, additionally, provides a summary of the '428 Patent including the '428 Patent's description of the term "below." *Id.* at 7–14.

3. Discussion—"below"

We start with the language of the claim. The term "below" is recited in the last limitation of each of independent claims 1, 14, and 23. The last limitation of claim 1 is set forth below.

> said first receiver is attached to said first canister so that the axis through the receiver bore is angled from the horizontal and said alignment features of said manifold and said first receiver are arranged so that, *when said manifold is initially inserted* into the bore of said first receiver, *the outlet opening of said manifold housing is in a first rotational position* about the axis through the receiver bore and, *when said manifold housing is rotated* in the bore, *the outlet opening is in a second rotational position* about the axis through the receiver bore *so that the outlet opening is*

> *located below the position of the outlet opening when the outlet opening is in the first rotational position.*

Ex. 1001, 21:62–22:7 (emphases added). Each of independent claims 14 and 23 recites a similar limitation.

We turn to the '428 Patent Specification. Patent Owner provides annotations of figures of the '428 Patent that pertain to the claim language above. Prelim. Resp. 11–12. In particular, Patent Owner provides annotations of: (1) Figure 5 of the '428 Patent illustrating an empty manifold receiver and the outlet opening in the first rotational position; and (2) Figure 3 of the '428 Patent illustrating the manifold receiver with the manifold inserted and the outlet opening in the second position, below its insertion position. *Id.* Figure 5 of the '428 Patent, with Patent Owner's annotation, is reproduced below.

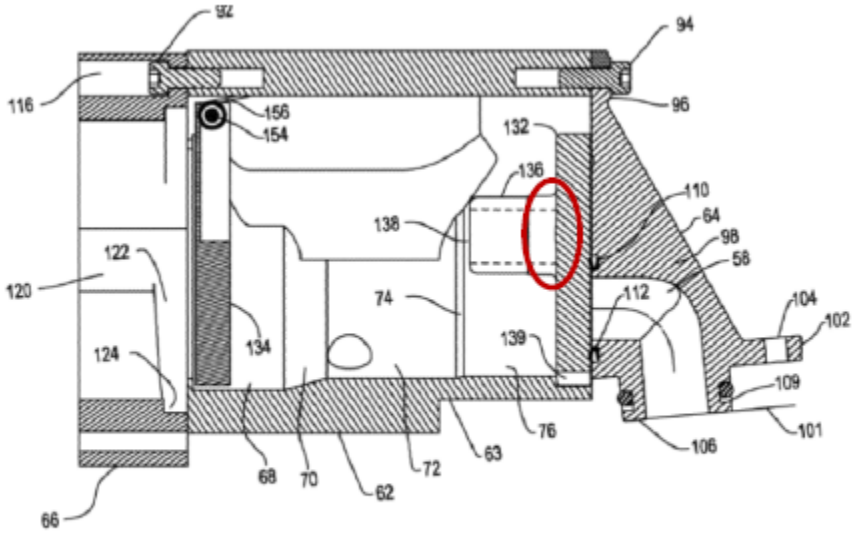


FIG. 5

Id. at 11 (citing Ex. 1001, Fig. 5). Figure 5 of the '428 Patent, above, illustrates a cross-sectional view of the manifold receiver including Patent

Owner's red annotation showing where the outlet would be when the manifold is first inserted. *Id.* (citing Ex. 1001, 3:63–65, 6:51–55, 13:50–14:7, Fig. 5).

Figure 3 of the '428 Patent, with Patent Owner's annotation, is reproduced below.

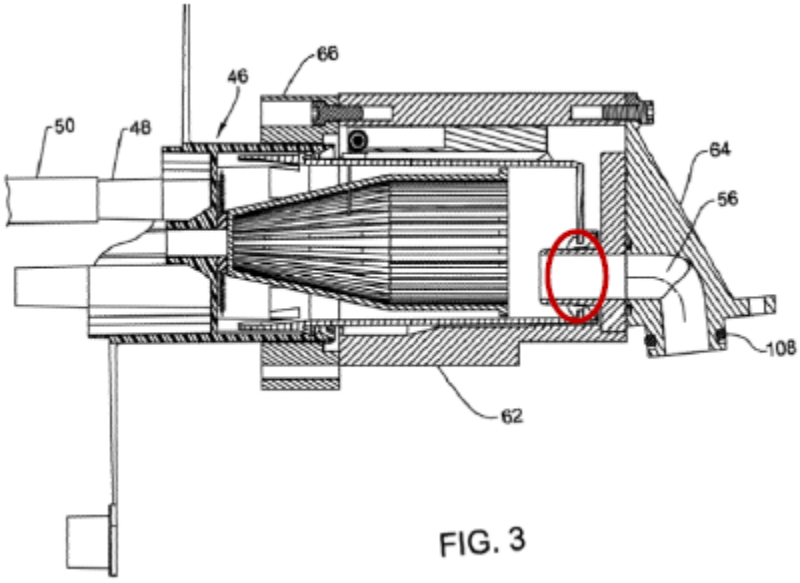


FIG. 3

Id. at 12. Figure 3 of the '428 Patent, above, illustrates a cross-sectional view of the manifold receiver with the manifold inserted and rotated within the receiver and includes Patent Owner's red annotation showing the outlet opening in the second or "run" position, below its insertion position. *Id.* at 11–12 (citing Ex. 1001, 3:59–60, 14:7–18, 16:30–35, Fig. 3). We find Patent Owner's contentions and annotations regarding the '428 Patent's description of the term "below" to be consistent with the description of that term in the '428 Patent.

Accordingly, in light of the Specification, we are persuaded by the parties' contentions and adopt Petitioner's proposed construction that the

broadest reasonable interpretation of "below" in light of the specification of the '428 Patent is "[b]eneath (lower than)" (Pet. 10–11).

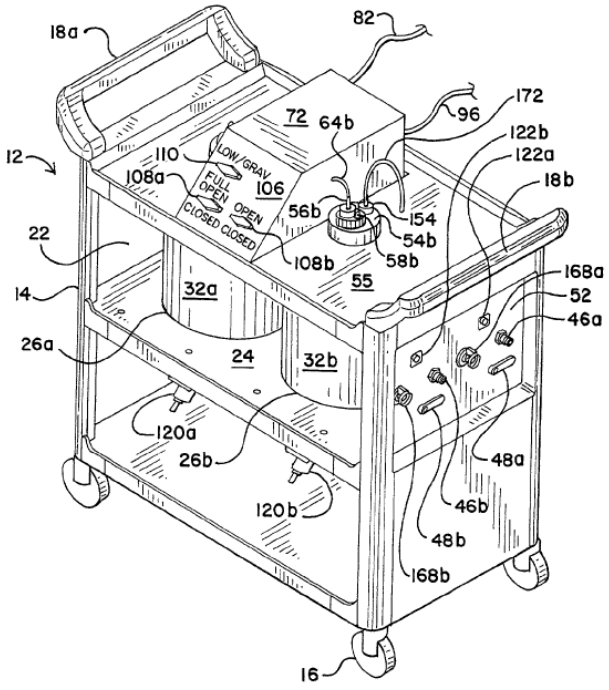
D. Obviousness over Dunn, Radford, and Adahan

Petitioner contends each of claims 1–3, 5, 6, 8, and 12 of the '428 Patent are unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, and Adahan. Pet. 5, 24–59. Patent Owner opposes. Prelim. Resp. 17–36. In our discussion below, we first provide a brief overview of the prior art, and then we address the parties' contentions in turn.

1. Overview of Dunn

Dunn is directed to a system for collecting biological fluids during a medical procedure and safely disposing of the waste. Ex. 1005 ¶ 2. Figure 1 of Dunn is reproduced below.

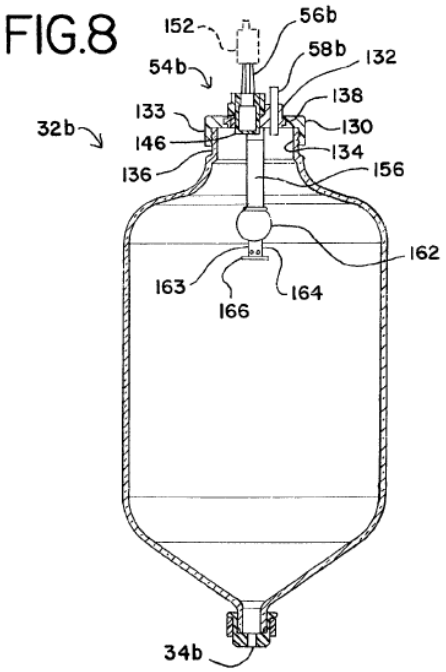
FIG. 1



Id. at Fig. 1. Figure 1 of Dunn, above, illustrates a perspective view of fluid collection cart 12 having cabinet-like body 14 and wheels 16. *Id.* ¶¶ 27, 38.

Body 14 of cart 12 defines interior space 22 within which shelf 24 is mounted. *Id.* ¶ 39. Shelf 24 has two openings 26*a* and 26*b* formed therein within which bottle-shaped containers 32*a* and 32*b* are secured. *Id.* Caps 54*a* and 54*b* close the tops of containers 32*a* and 32*b*. *Id.* ¶ 41. Caps 54*a* and 54*b* are constructed of plastic and include vacuum ports 56*a* and 56*b* and suction ports 58*a* and 58*b*. *Id.* Vacuum ports 56*a* and 56*b* are connected via flexible tubing 64*a* and 64*b*, respectively, to regulator housing 72, which includes regulator 76. *Id.* ¶¶ 41, 42. Vacuum source line 82 is connected to hospital vacuum source and communicates with regulator 76. *Id.* ¶ 42.

Figure 8 of Dunn illustrates an enlarged and detailed view of container 32*b* and is reproduced below. *Id.* ¶ 49.

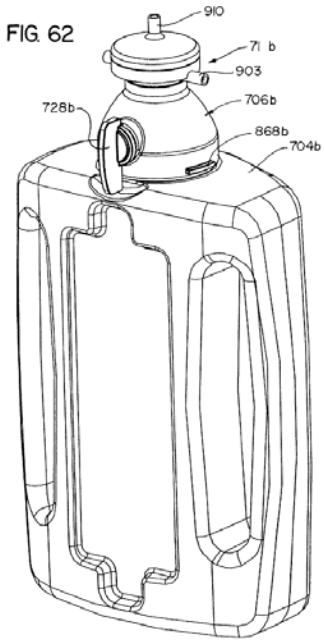


Id. at Fig. 8. Figure 8 of Dunn, above, illustrates an enlarged and detailed view of container 32*b* showing outer portion 130 and inner portion 132 of plastic cap 54*b*. *Id.* ¶ 49.

Inner portion 132 of cap 54*b* has opposing tabs 142*a* and 142*b* formed on its circumference. *Id.* ¶ 50. Horizontal slots 145*a* and 145*b* are formed in the bore 138 of outer cap portion 130 and vertical channels 147*a* and 147*b* corresponding to the width of the tabs are formed between the top surface of outer cap portion 130 and horizontal slots 145*a* and 145*b*. *Id.* To fasten, tabs 142*a* and 142*b* are lowered via vertical channels 147*a* and 147*b* into horizontal slots 145*a* and 145*b* and turned in the direction indicated by arrow 151 so that inner cap portion 132 is locked within bore 138 or outer cap portion 130. *Id.* Inner cap portion 132 may be removed from outer cap portion 130 for disposal after use. *Id.* ¶ 51.

2. Overview of Radford

Radford is directed to a system and method of disposing of medical waste. Ex. 1006, 1:8–10. In Radford's system, container 704 is positioned at a location near the patient. *Id.* at 39:3–4, 43:16–20. Figure 62 of Radford is reproduced below.



Id. at Fig. 62. Figure 62 shows container 704*b*[4] with plug and manifold assembly 716*b* mounted in the valve and connecting assembly 706*b*. *Id.* at 43:38–40.

Plug and manifold assembly 716*b* has body 734*b*, check valve assembly 740*b*, and cap 754*b*. *Id.* at 44:49–56, Fig. 69. Body 734*b* at its top end has two laterally extending and diametrically opposed intake fittings 903 adapted to be attached to patient suction tubes and also to be connected to tubular member 738*b*. *Id.* at 45:26–29. Biological fluids enter fittings 903 and exit through tubular member 738*b*. *Id.* at 45:45–49.

3. Overview of Adahan

Adahan is directed to a fluid pump for drawing off waste fluids in medical applications. Ex. 1007, 1:7–12. Figure 2 of Adahan is reproduced below.

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[4] Radford describes that container 704 is given a "b" suffix to distinguish it from other embodiments. *Id.* at 43:16–20.

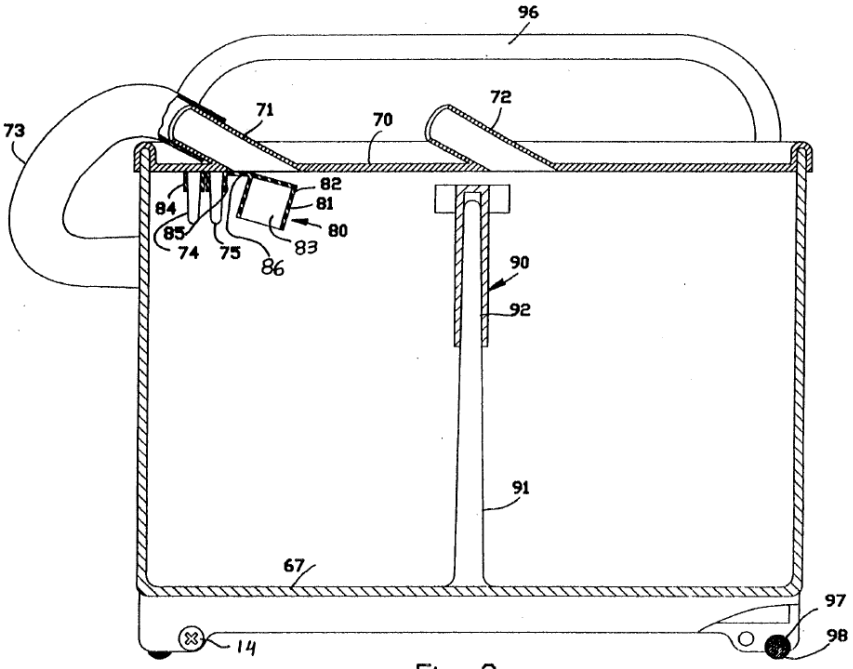


Fig. 2

Id. at Fig. 2. Figure 2 of Adahan, above, illustrates liquid collection container 4 in Adahan's fluid pump assembly. *Id.* at 2:51–57.

As shown in Figure 2, liquid collection container 4 has cover 70. *Id.* at 5:5–7. Vacuum inlet port 71 is formed in cover 70 at an acute angle, preferably about 30 degrees to the plane of cover 70. *Id.* at 5:5–9. Liquid inlet port 72 in cover 70 is formed in cover 70 at the same acute angle. *Id.* at 5:9–11.

4. Discussion of Claim 1

We begin our analysis with independent claim 1. Petitioner asserts that the combination of Dunn, Radford, and Adahan renders claim 1 obvious. Pet. 5, 24–50. Patent Owner opposes. Prelim. Resp. 17–36. Upon review of the parties' contentions and the evidence in the current record, we find that Petitioner has not shown sufficiently how the combined teachings

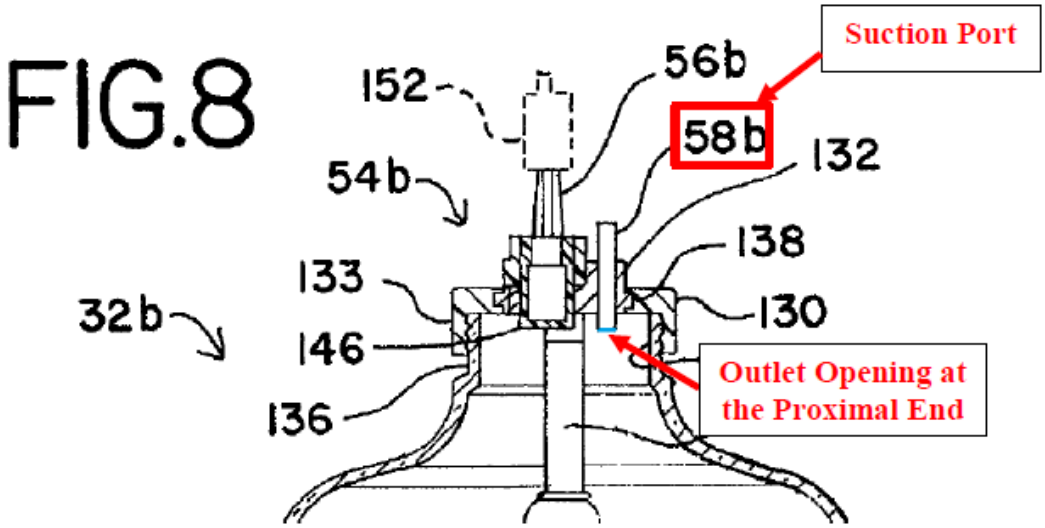
of Dunn, Radford, and Adahan teach each limitation of claim 1. Below we discuss one of the deficiencies in the Petition.

As an example, the Petition does not show sufficiently how the combined teachings of Dunn, Radford, and Adahan teach that the outlet opening in the second rotational position is *below* the position of the outlet opening when it is in the first rotational position, as recited in the last limitation of claim 1, set forth below.

> said first receiver is attached to said first canister so that the axis through the receiver bore is angled from the horizontal and said alignment features of said manifold and said first receiver are arranged so that, *when said manifold is initially inserted* into the bore of said first receiver, *the outlet opening of said manifold housing is in a first rotational position* about the axis through the receiver bore and, *when said manifold housing is rotated* in the bore, *the outlet opening is in a second rotational position* about the axis through the receiver bore *so that the outlet opening is located below the position of the outlet opening when the outlet opening is in the first rotational position*.

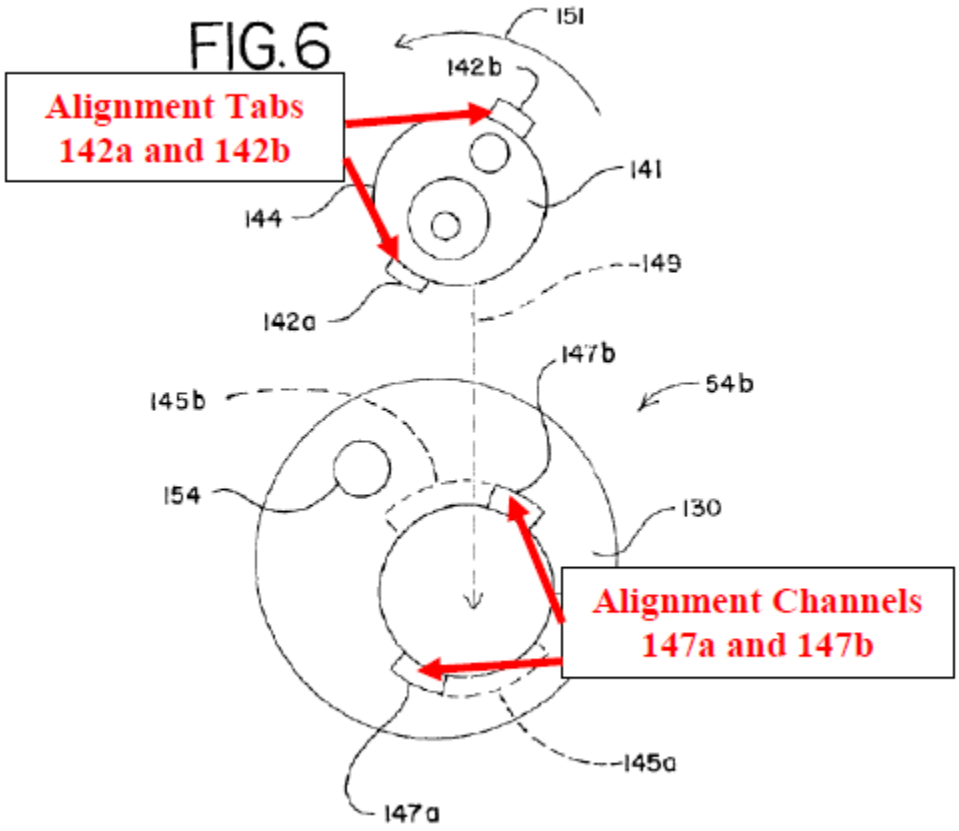
Ex. 1001, 21:62–22:7 (emphases added).

For the first receiver, Petitioner points to Dunn's outer portion 130 of cap 54*b*. Pet. 35–36 (citing Ex. 1005 ¶¶ 49–50, Fig. 8). For the manifold recited in the claim 1, Petitioner contends "*Dunn* teaches an inner cap portion 132, which is the claimed 'manifold.'" Pet. 25 (citing Ex. 1005 ¶¶ 49–52, Fig. 5). For the "outlet opening of said manifold housing" recited in claim 1, Petitioner points to "the outlet opening at the opposite end of suction port 58b." *Id.* at 29 (citing Ex. 1005, Fig. 8). Figure 8 of Dunn with Petitioner's annotations is reproduced below.



Pet. 29 (citing Ex. 1005, Fig. 8). Figure 8 of Dunn, above, illustrates a sectional view of container 32*b* having cap 54*b* with Petitioner's annotations including "Suction Port" in red text and a red arrow pointing to 58b and "Outlet Opening at the Proximal End" in red text and a red arrow pointing to the bottom portion of 58b, which is highlighted in light blue. Ex. 1005¶¶ 34, 49, Fig. 8; Pet. 29. Although not annotated, outer portion 130 (receiver) and inner cap portion 132 (manifold) of cap 54*b* are shown above in Figure 8.

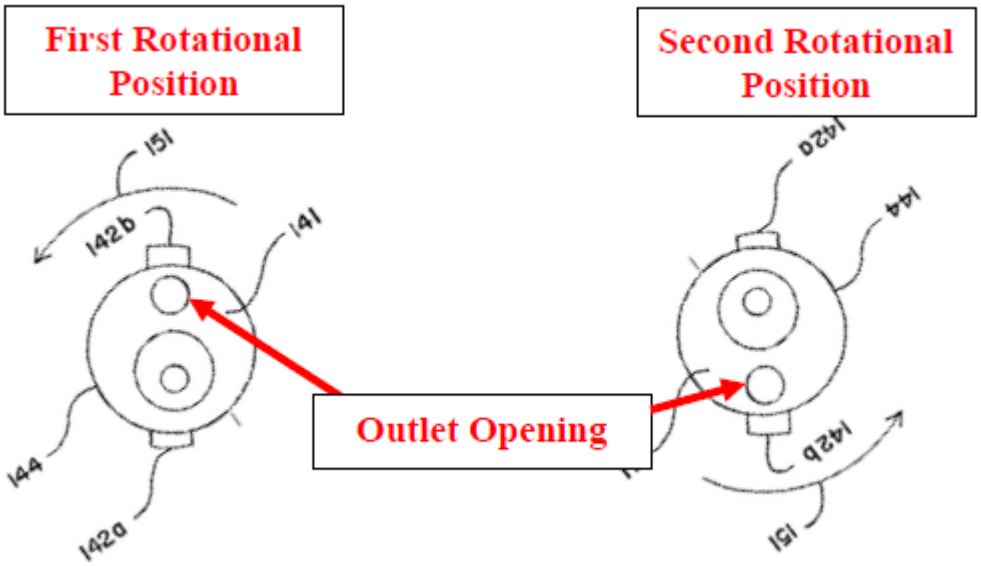
As set forth in the last limitation in claim 1, the alignment features of the manifold and the receiver are arranged so that, when the manifold is initially inserted, the outlet opening of the manifold housing is in a first rotational position. Ex. 1001, 21:64–22:1. For the alignment features, Petitioner points to Figure 6 of Dunn. Pet. 39–41, 45. Figure 6 of Dunn with Petitioner's annotations is reproduced below.



Pet. 45 (citing Ex. 1005, Fig. 6). Figure 6 of Dunn, above, illustrates an exploded, top plan view of container cap 54*b* with Petitioner's annotations including "Alignment Tabs" in red text and red arrows pointing to tabs 142*a* and 142*b* of inner cap portion 132 and "Alignment Channels" in red text with red arrows pointing to channels 147*a* and 147*b* of outer cap portion 130. Ex. 1005 ¶¶ 32, 49–51; Pet. 45.

Petitioner contends that after insertion, "the entire manifold/inner portion 132, including the outlet opening, rotates from a first rotational position about the axis through the receiver bore to a second rotational position about the axis through the receiver bore." Pet. 45 (citing Ex. 1005 ¶ 50, Fig. 6; Ex. 1002 ¶ 82). Petitioner provides a modified

version of Figure 6 of Dunn with Petitioner's further annotations, which is reproduced below.



Pet. 46 (citing Ex. 1005, Fig. 6); *see also id.* at 47 (including the same illustration). Petitioner's modified and annotated version of Figure 6 of Dunn, above, includes a partial view of Figure 6 illustrating inner portion 132 of container cap 54*b* reproduced twice, including a first reproduction that is the same as the original and a second reproduction is "rotated by Petitioner," i.e., 180 degrees rotated, and the modified Figure 6 has been annotated by Petitioner with "First Rotational Position" in red text directly above the first reproduction; "Second Rotational Position" in red text directly above the second, rotated reproduction; and "Outlet Opening" in red text between the first and second reproductions and red arrows pointing to the outlet in both copies. *Id.*

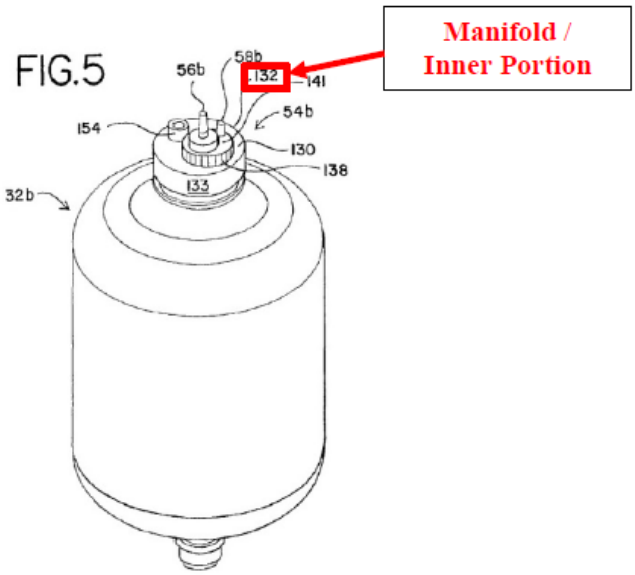
Regarding "so that the outlet opening is located below the position of the outlet opening when the outlet opening is in the first rotational position," recited in claim 1, Petitioner asserts:

> *Dunn* teaches this feature because, as a person of skill would have understood, the outlet starting position and degree of rotation were matters of design choice and that any starting and ending position would be options. (Ex. 1002 ¶¶ 81–87.) For example, one skilled in the art would just as readily have designed a system based on *Dunn*'s teachings where the outlet opening starts at 12 o'clock and rotates to 6 o'clock (*i.e.*, directly beneath its starting position), as shown below. (Ex. 1002 ¶ 83.) . . . A skilled artisan would have recognized multiple benefits of this configuration. For example, the fluid enters at the lowest point of the manifold, helping with drainage. And in this configuration, the waste fluid does not pass over the vacuum port as it enters the canister, making the waste less likely to be sucked toward or into the vacuum pump, potentially clogging it or any related filter. (Ex. 1002 ¶ 83.)

Pet. 46–47. Dr. Layton's testimony is substantially the same as Petitioner's contentions and includes only minor variations, such as substituting the term "[a] person skilled in the art" for "skilled artisan." *See, e.g.*, Ex. 1002 ¶¶ 81–83.

Patent Owner contends "Dunn rotates in the horizontal plane" and, thus, "changing Dunn to a 12- and 6-o'clock orientation does not change the fact that the Dunn outlet opening does not move 'below' where it was in any position since it rotates in a horizontal plane." Prelim. Resp. 32. Patent Owner points to other deficiencies in Petitioner's contentions and the testimony of Dr. Layton set forth above including that Dr. Layton does not offer sufficient evidentiary basis for his design selection. *Id.* at 31–33.

We agree with Patent Owner. Importantly, Figure 6 of Dunn "is an exploded *top* plan view of the container cap of FIG. 5." Ex. 1005 ¶ 32 (emphasis added). Figure 5 of Dunn with Petitioner's annotation is reproduced below.

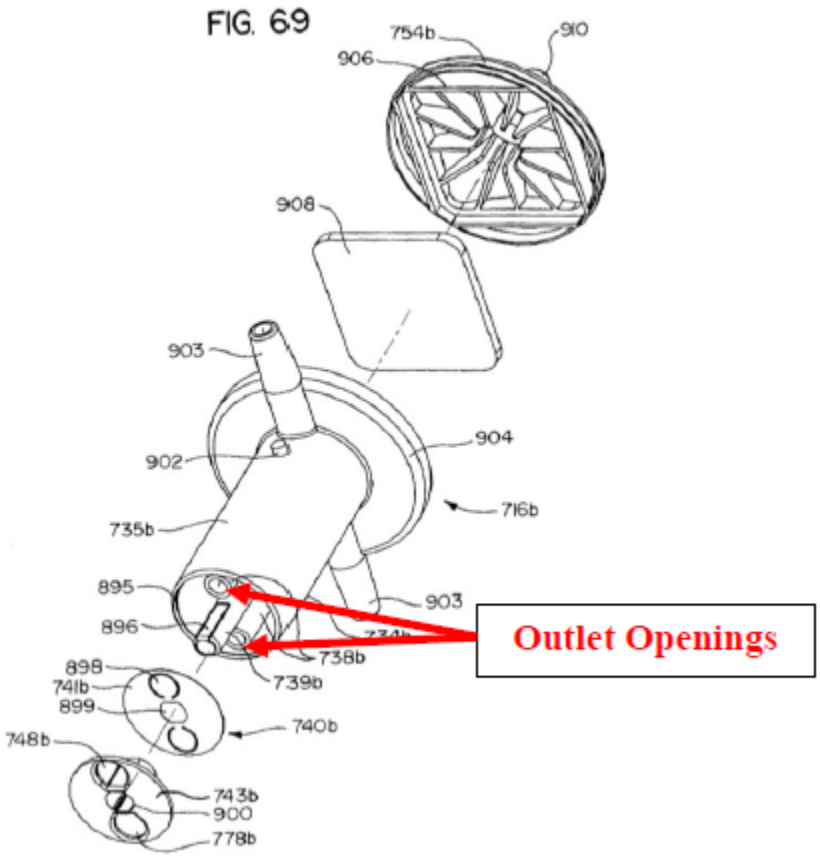


Pet. 26 (citing Ex. 1005, Fig. 5). Figure 5 of Dunn, above, illustrates an enlarged and detailed view of container 32*b* and includes Petitioner's annotation of a red box enclosing "132" and "Manifold/Inner Portion" in red text with a red arrow pointing to inner portion 132 of container cap 54*b*. *Id.*; Ex. 1005 ¶¶ 31, 49.

As can be seen, for example, in Figure 5 of Dunn, the outlet opening corresponding to suction port 58*b* rotates in the horizontal plane. As explained above in Section II.C.3, for purposes of this Decision, we adopt Petitioner's proposed construction that the broadest reasonable interpretation of "below" in light of the specification of the '428 Patent is "[b]eneath (lower than)" (Pet. 10–11). Petitioner's contentions and Dr. Layton's testimony (*id.* at 46–47; Ex. 1002 ¶¶ 81–83)) do not take into account sufficiently that Dunn describes that Figure 6 is a "*top plan view* of the container cap of FIG. 5." Ex. 1005 ¶ 32 (emphasis added). Contrary to Petitioner's contentions and Dr. Layton's testimony and consistent with Patent Owner's contentions, the outlet opening corresponding to suction port

58*b* simply rotates horizontally and, therefore, after rotation, it is not located beneath or lower than its position just after insertion. *See, e.g.*, Ex. 1005 ¶¶ 31, 32, 34, 49, 50; Figs. 5, 6, 8. Rather, the outlet opening appears to be located in the same vertical plane both before and after rotation. Petitioner does not show sufficiently that the second position of the outlet after being rotated horizontally meets the last recitation in claim 1 using the construction of "below" that Petitioner agrees to and proposes in the instant proceeding. *See, e.g.*, Pet. 10–11.

We turn to Petitioner's proposed modification of Dunn in view of Radford. Petitioner, more specifically, contends "[t]hat an outlet opening will move below its starting position is a near certainty when one modifies *Dunn*'s manifold to have multiple outlet openings that are arranged as in *Radford*'s Figure 69." Pet. 47; *see also id.* at 20–22 (asserting that a skilled artisan would have modified Dunn's design to include multiple suction fittings as taught by Radford). Figure 69 of Radford with Petitioner's annotation is reproduced below.

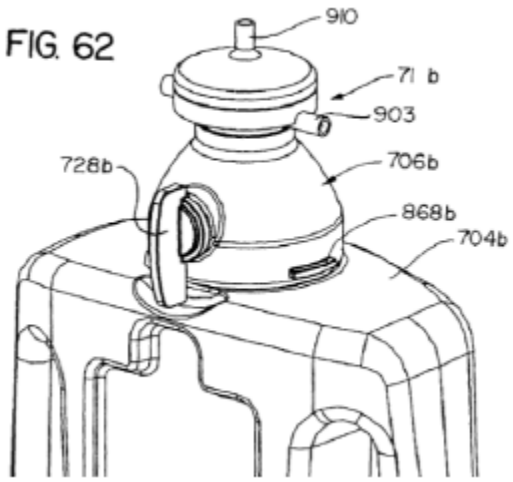


Pet. 47–48; *see also* Ex. 1002 ¶ 84 (testimony of Dr. Layton including the same annotation to Figure 69 of Radford). Figure 69 of Radford, above, illustrates an exploded, isometric view showing plug and manifold assembly 716*b* in accordance with the thirteenth embodiment in Radford and includes Petitioner's annotation "Outlet Openings" in red text with red arrows pointing to two tubular members 738*b*. Ex. 1006, 9:50–51, 43:15–16, 44:49–56, Fig. 69; Pet. 47–48.

Petitioner contends "[i]n this embodiment, nearly every rotation will result in one of the outlets being below its starting position." Pet. 48. Petitioner additionally points to an "exemplary 45 degrees of rotation" described with respect to a different embodiment in Radford. *Id.* at 48

(citing Ex. 1006, 38:58–64). Dr. Layton's testimony repeats Petitioner's contentions. *See, e.g.*, Ex. 1002 ¶¶ 84–85.

Patent Owner contends that Figure 69 of Radford illustrates two laterally extending fittings 903 and "despite presenting the openings in the vertical plane of the paper, the Radford assembly, like Dunn, also rotates in the horizontal plane." Prelim. Resp. 33–34. Patent Owner contends Figure 62, for example, "shows that the cap of Figure 69 is horizontally-oriented relative to the container." *Id.* (citing Ex. 1006, 43:15–16, 43:38–50, Figs. 62, 69). A partial view of Figure 62 of Radford provided by Patent Owner is reproduced below.

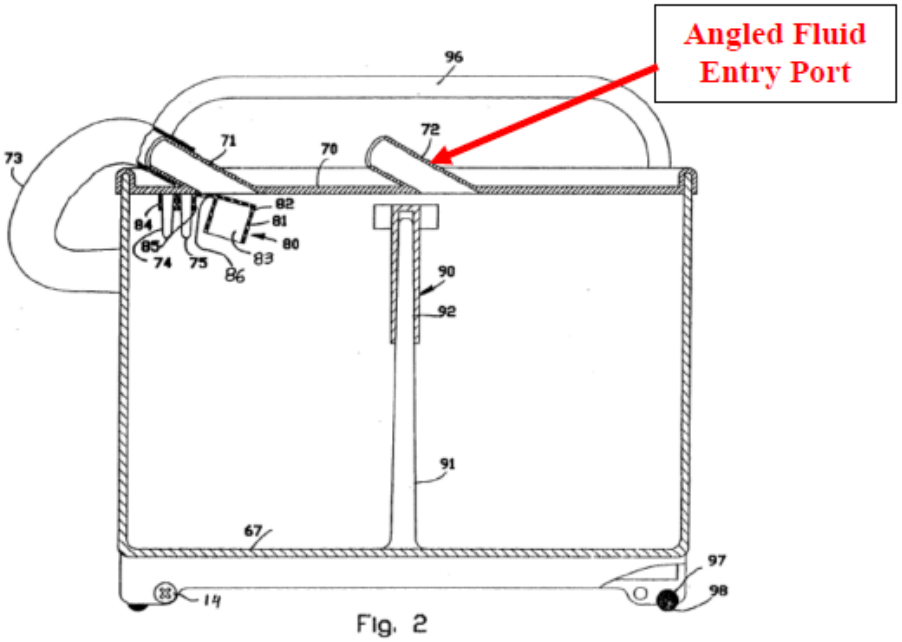


Id. (citing Ex. 1006, Fig. 62). Figure 62 of Radford has been modified by Patent Owner to show only the top portion of container 704b and illustrates plug and manifold assembly 716*b*, as well as laterally extending intake fittings 903. Ex. 1006, 43:38–50, 45:26–29, Fig. 62.

We agree with Patent Owner. As shown in Figure 62 of Radford lateral fittings 903 and manifold assembly 716*b*, including openings 738*b* rotate in the horizontal plane. Ex. 1006, 43:38–50, 45:26–29, Figs. 62, 69.

Moving openings from one location in the horizontal plane to another location in the same horizontal plane does not result in either outlet opening being below where it was originally. Petitioner does not show sufficiently modifying Dunn in accordance with Radford meets the last recitation in claim 1 using the construction of "below" that Petitioner agrees to and proposes in the instant proceeding. *See, e.g.*, Pet. 10–11.

We next turn to Petitioner's proposed modification of the combined teachings of Dunn and Radford in view of Adahan. Petitioner, more specifically, contends "incorporating into *Dunn*'s system *Radford*'s multiple outlet openings with *Adahan*'s angled inlet, rotating the manifold will cause at least one of the openings to be 'below' the position it was in when the manifold was in the first position." Pet. 49 (citing Ex. 1002 ¶ 86). Figure 2 of Adahan with Petitioner's annotation is reproduced below.



Pet. 43 (citing Ex. 1007, Fig. 2). Figure 2 of Adahan, above, illustrates a sectional view of liquid collection container 4 with Petitioner's annotation "Angled Fluid Entry Port" in red text and a red arrow pointing to liquid inlet

port 72. Ex. 1007, 2:34–35, 2:52–57, 4:66–67; Pet. 43. Dr. Layton's testimony includes that same annotation and is substantially the same as Petitioner's contentions. *See, e.g.*, Ex. 1002 ¶¶ 78, 79, 86, 87.

Patent Owner contends that Petitioner "does not explain how it would envision modifying Dunn/Radford so that it had multiple 'angled inlet[s]' or how that would satisfy the claim limitation" and that such angling in the device illustrated in Figure 69 of Radford "would disrupt operation of the device." Prelim. Resp. 35. Patent Owner also asserts that Petitioner's proposal is "a hindsight attempt to recreate the invention." *Id.* at 36. Patent Owner provides an annotated Figure 2 of Adahan, which is reproduced below.

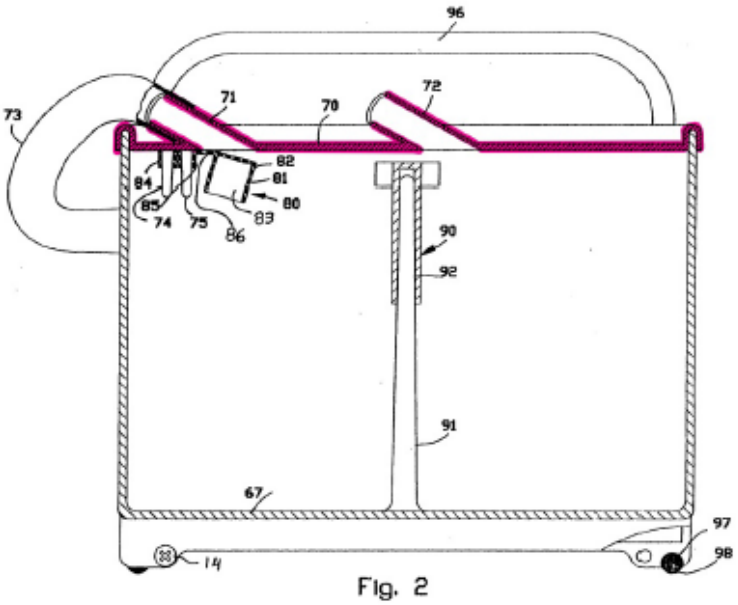


Fig. 2

Prelim. Resp. 39 (citing Ex. 1007, Fig. 2). Figure 2 of Adahan, above, illustrates a sectional view of liquid collection container 4 with Patent Owner's annotation highlighting in purple cover 70, inlet port 71, and inlet port 72. Ex. 1007, 2:34–35, 2:52–57, 4:66–67; Prelim. Resp. 39.

We start with Patent Owner's conclusion, i.e., that Petitioner does not show how the combined teachings of Dunn, Radford, and Adahan teach the last recitation in claim 1. *Id.* at 35–36. We agree. As shown in Figure 2 of Adahan, cover 70 of Adahan's container is *horizontal*. *See, e.g.*, Ex. 1007, Fig. 2. The opening in cover 70 corresponding to entry port 72, likewise is horizontal. *Id.* Petitioner does not show how incorporating Adahan's teachings meets the last limitation recited in claim 1, as cover 70 and the openings in cover 70 are horizontal, so the outlet opening in inner cap portion 132 corresponding to suction port 58*b* again would rotate horizontally.

We turn to Patent Owner's contention that Petitioner "does not explain how it would envision modifying Dunn/Radford so that it had multiple 'angled inlet[s]'" and that Petitioner's proposal is "a hindsight attempt to recreate the invention." Prelim. Resp. 35–36. For completeness, we note additional contentions provided by Petitioner in a section entitled "**Rationale to Combine *Dunn*, *Radford*, and *Adahan***." Pet. 18–24. In this section, Petitioner asserts:

> One skilled in the art would also recognize that high velocity or high turbulent fluids may agitate the pre-existing fluid and cause the creation of foam, which can result in at least two unfavorable conditions. (Ex. 1002 ¶¶ 35-36.) The first is that fluid with foam on the top may give an inaccurate volume collection reading, and similar to splashing, may prematurely activate the shut-off mechanism. (*Id.*; *see also* Ex. 1018, 6–7.) The second is that foam bubbles may move into the vacuum line, creating additional potential failure modes (e.g., the foam bubbles may not exert enough force to close the shut-off valve). (*Id.*) One skilled in the art would have recognized these issues and introduced into *Dunn*'s system a solution like *Adahan*'s *angling of the fluid entry port*. (Ex. 1002 ¶¶ 47–48).

> *Adahan* also teaches that *angling the vacuum and suction ports* can provide additional flexibility in routing the vacuum and suction lines, helping prevent kinks in the lines that could obstruct the passage of air or liquids. (*Adahan*, 5:15-25; *see also* Ex. 1018, 6–7; Ex. 1002 ¶ 47.)

Pet. 19, 20 (emphases added). This assertion is similar to Petitioner's proposal discussed above, i.e., "incorporating into *Dunn*'s system *Radford*'s multiple outlet openings with *Adahan*'s *angled inlet*" (Pet. 49 (emphasis added)) because Petitioner again proposes to angling as taught in Adahan. Pet. 19, 20, 49. Petitioner's assertion, therefore, is deficient for the same reason discussed, i.e., Petitioner does not show that the resulting combination meets the last limitation recited in claim 1 because Adahan's cover 70 and opening corresponding to entry port 72 in cover 70 are horizontal. *See, e.g.*, Ex. 1007, Fig. 2.

In this same section, however, Petitioner also asserts "a skilled artisan would have been motivated more specifically to modify *Dunn*'s vertical bore through its receiver/outer portion 130 to angle the bore in the manner described by *Adahan*." *Id.* at 19 (citing Ex. 1002 ¶¶ 45, 47–48). We agree with Patent Owner (Prelim. Resp. 35–36) that Petitioner's contentions in that regard lack sufficient explanation. Dr. Layton testifies that the proposed modification is "minor" and "other features of the waste collection system" would be left "essentially unchanged." Ex. 1002 ¶ 48. To the extent Petitioner's proposed modification can be ascertained, angling in light of Adahan's teachings results in the aforementioned deficiency. To the extent that Petitioner proposes a more extensive modification, we agree with Patent Owner that Petitioner is engaging in impermissible hindsight reconstruction, because such modification is not taught by Adahan and sufficient reasoning apart from what is described in the Specification has not been provided.

In summary, the deficiency discussed herein pertains to the requirement in claim 1 that the outlet opening of the "manifold housing," after rotation, must be below where it was when it was inserted. Ex. 1001, 21:67–22:7. Petitioner does not propose modifying inner portion 132 of container cap 54*b*, which Petitioner relies upon for teaching the manifold recited in claim 1. Pet. 18–49. Petitioner's asserted modification, to the extent it can be ascertained, is to modify Dunn in light of Adahan's teachings that cover 70 and opening corresponding to entry port 72 in cover 70 are horizontal. Pet. 18–24, 49; Ex. 1007, Fig. 2. The outlet opening in inner cap portion 132 corresponding to suction port 58*b*, therefore, would rotate horizontally. Dr. Layton's testimony does not remedy the deficiency in the Petition because it is similar to Petitioner's contentions, except that it is organized slightly differently. *See, e.g.*, Ex. 1002 ¶¶ 35–37, 47–48, 81–87. Accordingly, Petitioner does not show sufficiently that modifying Dunn in accordance with Radford and Adahan meets the last recitation in claim 1 using the construction of "below" that Petitioner agrees to and proposes in the instant proceeding. *See, e.g.*, Pet. 10–11.

Petitioner provides a remaining contention that "Dunn also teaches this feature in its embodiment where, instead of alignment/engagement tabs, 'mating threads' are provided." Pet. 50. Petitioner, more specifically, asserts:

> By screwing the manifold into a vertically-oriented receiver (i.e., a receiver at 90 degrees from the horizontal), the entire manifold (including the outlet opening on the manifold) will travel vertically downward such that the outlet opening is lower in its second position than in its first position. The downward distance traveled will depend on the pitch of the screw threads and the number of turns used to engage the mating threads, but

> in all cases the outlet opening will be below, beneath, and lower than its original position.

Id. (citing Ex. 1005 ¶ 52; Ex. 1002 ¶ 87). Dr. Layton's testimony regarding this embodiment is substantially the same as Petitioner's contentions. *Compare* Ex. 1002 ¶ 87 (citing Ex. 1005 ¶ 52) *with* Pet. 50.

Petitioner's contentions and Dr. Layton's testimony are not consistent with Dunn's teachings. Paragraph 52 of Dunn is set forth below:

> It should be noted that other temporary inner cap portion fastening arrangements may be substituted for the one illustrated in FIG. 6. For example, bore 138 of outer cap portion 130 and the circumference 144 of inner cap portion 132 could be provided with mating threads so that the inner portion is screwed into the bore of the outer cap portion.

Ex. 1005 ¶ 52. Contrary to Petitioner's remaining contention, paragraph 52 of Dunn does not teach or suggest the outlet opening or inner cap portion 132 traveling vertically downward, a pitch of a screw threads, or a number of turns. *Id.* Also contrary to Petitioner's remaining contention, Petitioner's examples throughout are of rotations less than one turn and include an exemplary rotation of 45 degrees (Pet. 48 (citing Ex. 1006, 38:58–64)) and other illustrative examples of rotations less than 360 degrees (*id.* at 49 (citing Ex. 1002 ¶¶ 81–87)). Petitioner's examples of rotations less than a full turn are consistent with Patent Owner's contentions that the teachings of rotation relied upon by Petitioner are in the horizontal plane.

Petitioner's remaining contention also is deficient because Petitioner relies on the alignment features for other elements of claim 1. Petitioner does not provide a specific proposal regarding combining the mating threads embodiment of Dunn with other teachings discussed herein, including the teachings of Radford, Adahan, or other of Dunn's teachings.

Accordingly, on this record, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claim 1 is unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, and Adahan.

5. Discussion of Dependent Claims 2, 3, 5, 6, 8, and 12

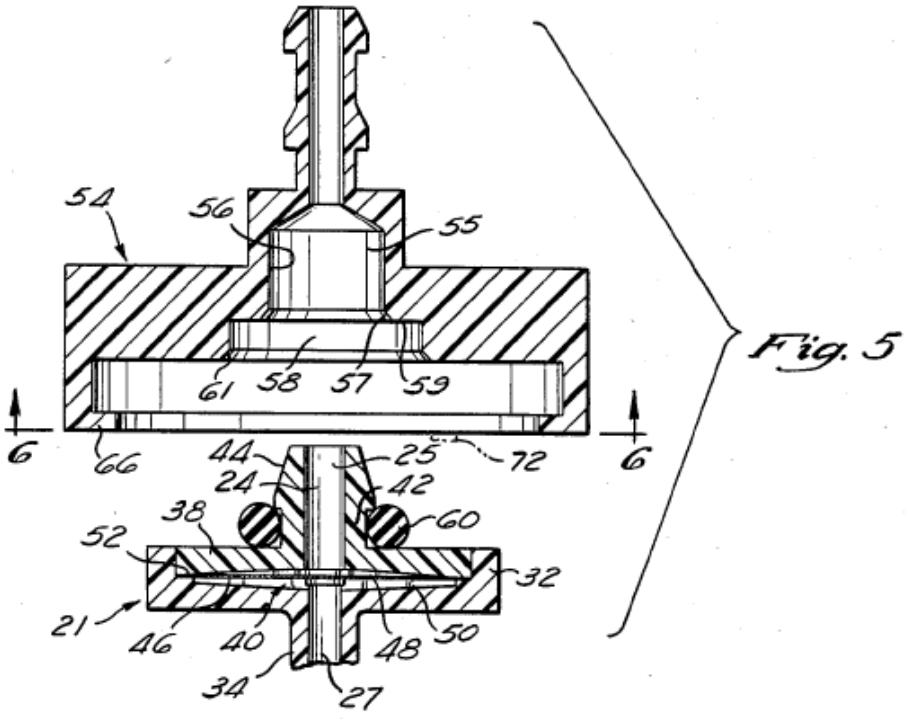
Petitioner contends each of claims 2, 3, 5, 6, 8, and 12 of the '428 Patent are unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, and Adahan. Pet. 5, 51–71. Each of dependent claims 2, 3, 5, 6, 8, and 12 depends, directly or indirectly, from claim 1. Petitioner's contentions for dependent claims 2, 3, 5, 6, 8, and 12 do not remedy the aforementioned deficiency discussed with respect to claim 1. *See supra* § II.D.4. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claims 2, 3, 5, 6, 8 and 12 are unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, and Adahan.

E. Obviousness over Dunn, Radford, Adahan, and Blake

Petitioner contends each of claims 4, 14, 15, and 22 of the '428 Patent are unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, Adahan, and Blake. Pet. 5, 59–67. Patent Owner opposes. *See generally* Prelim. Resp. In our discussion below, we first provide a brief overview of the prior art, and then we address the parties' contentions in turn.

1. Overview of Blake

Blake is directed to an improved fluid T-coupling filter system for use during eye surgery. Ex. 1008, 1:5–13. Figure 5 of Blake is reproduced below.



Id. at Fig. 5. Figure 5 of Blake, above, illustrates a sectional view of bayonet connector 21 of coupling 10 and bayonet receptacle 54 on an aspirator. *Id.* at 6:30–55. Bayonet connector 21 is inserted into bayonet receptacle 54. *Id.* at 3:23–26, 6:30–55. Bayonet connector 21 has tabs 62 and 64 that are inserted through corresponding notches 68 and 70 of bayonet receptacle 54. *Id.* at 6:66–7:9, Figs. 4, 6.

2. Claims 4 and 14

Petitioner asserts that the combination of Dunn, Radford, Adahan, and Blake renders dependent claim 4 and independent claim 14 obvious. Pet. 5,

59–67. Dependent claim 4 and independent claim 14 recite further details relating to the alignment features and require, for example, two tabs that extend outwardly, two slots to receive the tabs, and two grooves. Ex. 1001, 22:26–43, 23:37–24:20. The last limitation recited in claim 14 is similar to the last limitation recited in claim 1, except the last limitation recited in claim 14 further requires that the alignment features be tabs and slots. *Compare* Ex. 1001, 24:7–20 *with id.* at 21:62–22:7.

For dependent claim 4, Petitioner relies on Blake to further modify the combined Dunn, Radford, Adahan system. Pet. 59–67. In particular, Petitioner points to Blake's teachings of tabs 62 and 64 in combination with corresponding notches 68 and 70. *Id.* (citing *e.g.*, Ex. 1008, 2:29–46, 3:29–50, 6:56–8:2, Figs, 4, 6). Claim 4 depends from claim 2, which depends from claim 1. Petitioner's contentions for dependent claim 4 do not remedy the aforementioned deficiency discussed with respect to claim 1. *See supra* § II.D.4.

For independent claim 14, Petitioner provides only the contentions below.

> The features of claim 14 are substantially similar to those of claim 1. The primary exception is that claim 14 recites additional details for the alignment features. (Ex. 1002 ¶¶ 105-07.) But these additional details are similarly recited in claim 4, so *Dunn*/*Radford*/*Adahan*/*Blake* discloses these features for the same reasons discussed above for claims 1 and 4. (*See* Sections VII.E.1 and VIII.C.1 above; Ex. 1002 ¶¶ 105-07 (comparing claim 14 to claims 1 and 4).

Pet. 67.

As discussed above, as with claim 1, claim 14 requires that upon insertion, the outlet opening of said manifold housing is in a first rotational position and, when said manifold housing is rotated in the bore, the outlet

opening is in a second rotational position, which is located below the first rotational position. Ex. 1001, 24:7–20. Petitioner's contentions for independent claim 14 do not remedy the aforementioned deficiency discussed with respect to claim 1. *See supra* § II.D.4.

Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claims 4 and 14 are unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, Adahan, and Blake.

3. Dependent claims 15 and 22

Petitioner contends that claims 15 and 22 of the '428 Patent are unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, Adahan, and Blake. Pet. 5, 67. Each of dependent claims 15 and 22 depends directly from claim 14. Petitioner's contentions for dependent claims 15 and 22 refer to Petitioner's contentions for claims 5 and 12 and do not remedy the aforementioned deficiency discussed with respect to claim 14. *See supra* § II.E.2. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claims 15 and 22 are unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, Adahan, and Blake.

F. Obviousness over Dunn, Radford, Adahan, and Glenn

Petitioner contends each of claims 10, 16, 18, 20, 23, 24, and 28–30 of the '428 Patent are unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, Adahan, and Glenn. Pet. 5, 67–78. Patent Owner opposes. *See generally* Prelim. Resp. In our discussion below, we first provide a brief

overview of the prior art, and then we address the parties' contentions in turn.

1. Overview of Glenn

Glenn is directed to a canister mounted portable surgical aspirator. Ex. 1009, 2:15–17. Glenn describes dual pumps 15 that are connected through pressure transfer lines to regulators 16, respectively. *Id.* at 4:50–52. Pumps 15 provide a vacuum through valve 17 to vacuum port 18. *Id.* at 4:52–53, 5:52–58.

2. Independent Claim 23

Petitioner asserts that the combination of Dunn, Radford, Adahan, and Glenn renders independent claim 23 obvious. Pet. 5, 75–77. Claim 23 is similar to claims 1 and 14, with a couple differences. One exemplary difference is that claim 23 recites "a suction pump mounted to said cart in fluid communication with the first canister for drawing a suction on the first canister." Ex. 1001, 25:18–20. Petitioner refers to its contentions for claim 10, in which Petitioner asserts that Glenn's suction pumps teach this limitation. Pet. 69–75.

An additional exemplary difference as compared to claim 1, claim 23 recites additional details relating to alignment features. Ex. 1001, 25:20–44. Petitioner references its contentions for claim 4. Pet. 75. For dependent claim 4, however, Petitioner relies on Blake's teachings tabs 62 and 64 in combination with corresponding notches 68 and 70 to further modify the combined Dunn, Radford, Adahan system. Pet. 59–67 (citing *e.g.*, Ex. 1008, 2:29–46, 3:29–50, 6:56–8:2, Figs, 4, 6). Petitioner's challenge of claim 23 does not include Blake. *See, e.g.*, Pet. 5, 75. We need not discuss this

deficiency to arrive at our determination, in light of the deficiency discussed below.

Similar to claims 1 and 14, claim 23 recites:

> when the tab of the manifold is initially inserted into the slot of said first receiver, the outlet opening of the manifold is in a first rotational position about the axis through the receiver bore and, when the manifold is rotated in the bore, the outlet opening is in a second rotational position about the axis through the receiver bore so that the outlet opening is located below the position of the outlet opening when the outlet opening is in the first rotational position.

Ex. 1001, 25:36–44.

Petitioner relies on its contentions for claim 1 for that limitation recited in claim 23, without including supplementation, for example, regarding Glenn. Pet. 75–77. Petitioner's contentions for independent claim 23 do not remedy the aforementioned deficiency discussed with respect to claim 1. *See supra* § II.D.4.

Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claim 23 is unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, Adahan, and Glenn.

3. Dependent claims 10, 16, 18, 20, 24, and 28–30

Each of dependent claims 10, 16, 18, 20, 24, and 28–30 depends directly from claim 1, 14, or 23. Petitioner's contentions for dependent claims 10, 16, 18, 20, 24, and 28–30 (Pet. 67–74, 77–78) do not remedy the aforementioned deficiency discussed with respect to claims 1, 14, and 23. *See supra* §§ II.D.4, II.E.2, II.F.2. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing

that claims 10, 16, 18, 20, 24, and 28–30 are unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, Adahan, and Glenn.

G. Obviousness over Dunn, Radford, Adahan, Blake, and Glenn

Petitioner contends dependent claim 25 of the '428 Patent is unpatentable, under 35 U.S.C. § 103(a), as obvious over Dunn, Radford, Adahan, Blake, and Glenn. Pet. 78–79. Claim 25 depends directly from claim 23. Petitioner's contentions for dependent claim 25 do not remedy the aforementioned deficiency discussed with respect to claim 23. *See supra* § II.F.2. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in establishing that claim 25 is unpatentable, under 35 U.S.C. § 103(a), over Dunn, Radford, Adahan, Blake, and Glenn.

III. CONCLUSION

For the foregoing reasons, we conclude that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in showing that claims 1–6, 8, 10, 12, 14–16, 18, 20, 22–25, and 28–30 of the '428 Patent are unpatentable.

IV. ORDER

Accordingly, it is hereby:

ORDERED that Petitioner's request for an *inter partes* review of claims 1–6, 8, 10, 12, 14–16, 18, 20, 22–25, and 28–30 of the '428 Patent is *denied*.

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