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In re Patent of:	Ignon et al.	
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Title:	DEVICES AND METHODS FOR TREATING SKIN	

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**PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT
NO. 12,053,607 PURSUANT TO 35 U.S.C. §§ 311–319, 37 C.F.R. § 42**

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EXHIBITS

- EUNSUNG-1001 U.S. Pat. No. 12,053,607 to Ignon (“the ’607 patent”)
- EUNSUNG-1002 Excerpts from the Prosecution History of the ’607 patent (“the Prosecution History”)
- EUNSUNG-1003 Declaration of Mr. Eric Simon
- EUNSUNG-1004 U.S. Patent Publication No. 2003/0212415 (“Karasiuk”)
- EUNSUNG-1005 U.S. Patent No. 5,199,604 (“Palmer”)
- EUNSUNG-1006 U.S. Patent Publication No. 2003/0093089 (“Greenberg”)
- EUNSUNG-1007 U.S. Patent No. 6,390,815 (“Pond”)
- EUNSUNG-1008 U.S. Patent No. 6,684,880 (“Trueba”)
- EUNSUNG-1009 U.S. Patent No. 4,512,764 (“Wunsch 1982”)
- EUNSUNG-1010 U.S. Patent Publication No. 2003/0018252 (“Duchon”)
- EUNSUNG-1011 U.S. Patent No. 4,215,476 (“Armstrong”)
- EUNSUNG-1012 Friedman, et al., Chemical peels, dermabrasion, and laser therapy, *Disease-a-Month* 55.4 (2009): 223-235 (“Friedman”)
- EUNSUNG-1013 Burgess, Cheryl M., *Cosmetic dermatology*, Heidelberg, Germany: Springer, 2005 (“Burgess”)
- EUNSUNG-1014 Pickering, J. A., Touch-sensitive screens: the technologies and their application, *International Journal of Man-Machine Studies* 25.3 (1986): 249-269 (“Pickering”)
- EUNSUNG-1015 Friedman, Mark J. et al., The AMSA injection: A new concept for local anesthesia of maxillary teeth using a computer-controlled injection system. *Quintessence Int* 29 (1998): 297-

303 (“Friedman 1998”)

- EUNSUNG-1016 Lee, Woan-Ruoh, et al., Lasers and microdermabrasion enhance and control topical delivery of vitamin C, Journal of investigative dermatology 121.5 (2003): 1118-1125 (“Lee”)
- EUNSUNG-1017 U.S. Patent No. 9,550,052 (“the ’052 patent”)
- EUNSUNG-1018 U.S. Patent No. 11,446,477 (“the ’477 patent”)
- EUNSUNG-1019 U.S. Patent No. 6,428,518 (“Brengele”)
- EUNSUNG-1020 U.S. Patent No. 4,559,036 (“Wunsch”)
- EUNSUNG-1021 U.S. Patent No. 6,099,511 (“Devos”)
- EUNSUNG-1022 U.S. Patent No. 5,163,902 (“Lynn”)
- EUNSUNG-1023 U.S. Patent No. 5,190,525 (“Oswald”)
- EUNSUNG-1024 U.S. Patent No. 6,673,082 (“Mallett”)
- EUNSUNG-1025 Rajan, Poonam, et al., Skin barrier changes induced by aluminum oxide and sodium chloride microdermabrasion, Dermatologic surgery 28.5 (2002): 390-393 (“Rajan”)
- EUNSUNG-1026 Karimipour, Darius J., et al., Molecular analysis of aggressive microdermabrasion in photoaged skin, Archives of dermatology 145.10 (2009): 1114-1122 (“Karimipour”)
- EUNSUNG-1027 U.S. Patent No. 6,241,739 (“Waldron-739”)
- EUNSUNG-1028 U.S. Patent No. 6,926,681 (“Ramey”)
- EUNSUNG-1029 U.S. Patent No. 6,641,591 (“Shadduck”)

EUNSUNG-1030 Ron M. Shelton, *Prevention of Cross-Contamination When Using Microdermabrasion Equipment*, 72 CUTIS 266 (2003) (“Shelton”)

EUNSUNG-1031 Walter K. Nahm et al., *Microdermabrasion for Treatment of Photoaging*, in PHOTOAGING 217 (Darrell S. Rigel et al. eds., 2004) (“Nahm”)

EUNSUNG-1032 U.S. Patent No. 6,562,050 (“Owen”)

EUNSUNG-1033 U.S. Patent No. 6,500,183 (“Waldron”)

LISTING OF CLAIMS

Claim 1	
[1.pre]	A skin treatment system, comprising:
[1.1]	a console configured to receive a first container containing a first treatment material and a second container containing a second treatment material;
[1.2]	a handpiece configured to couple to a tip that can be pressed against skin to perform skin treatment;
[1.3]	a supply line connected between the handpiece and the console for sequentially delivering treatment material to the handpiece from the first container or the second container;
[1.4]	a waste line connected between the handpiece and the console; and
[1.5]	a vacuum source configured to create a vacuum that draws waste material from the handpiece through the waste line for disposal and that draws treatment material from either the first container or the second container to the handpiece when the tip is pressed against skin.
Claim 2	
[2.pre]	The system of claim 1, further comprising:
[2.1]	a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece, wherein the flow rate controller is located on the handpiece or on the console; and
[2.2]	a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.
Claim 3	
[3]	The system of claim 1, further comprising a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece.

Claim 4	
[4]	The system of claim 3, wherein the flow rate controller is located on the handpiece.
Claim 5	
[5]	The system of claim 3, wherein the flow rate controller is located on the console.
Claim 6	
[6]	The system of claim 1, further comprising a computing device configured to control at least one function of the system.
Claim 7	
[7]	The system of claim 1, further comprising a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.
Claim 8	
[8]	The system of claim 7, wherein the user input device comprises a touch screen.
Claim 9	
[9]	The system of claim 7, wherein the user input device is positioned on the console.
Claim 10	
[10]	The system of claim 1, wherein the console comprises a display.
Claim 11	
[11.pre]	A skin treatment system, comprising:
[11.1]	a console configured to receive a first container containing a first treatment material and a second container containing a second treatment material;

[11.2]	a handpiece configured to couple to a tip that can be placed against skin to perform skin treatment;
[11.3]	a supply line extending between the handpiece and the console for sequentially delivering treatment material to the handpiece from the first container or the second container;
[11.4]	a waste line extending between the handpiece and the console;
[11.5]	a vacuum source configured to create a vacuum that draws waste material from the handpiece through the waste line for disposal and that draws treatment material from either the first container or the second container to the handpiece when the tip is placed against skin; and
[11.6]	a computing device configured to control at least one function of the system.
Claim 12	
[12.pre]	The system of claim 11, further comprising:
[12.1]	a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece, wherein the flow rate controller is located on the handpiece or on the console; and
[12.2]	a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.
Claim 13	
[13]	The system of claim 11, further comprising a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece.
Claim 14	
[14]	The system of claim 13, wherein the flow rate controller is located on the handpiece.

Claim 15	
[15]	The system of claim 13, wherein the flow rate controller is located on the console.
Claim 16	
[16]	The system of claim 11, further comprising a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.
Claim 17	
[17]	The system of claim 16, wherein the user input device comprises a touch screen.
Claim 18	
[18]	The system of claim 16, wherein the user input device is positioned on the console.
Claim 19	
[19]	The system of claim 11, wherein the console comprises a display.
Claim 20	
[20.pre]	A skin treatment system, comprising:
[20.1]	a console configured to receive a first container containing a first treatment material and a second container containing a second treatment material;
[20.2]	a handpiece configured to couple to a tip that can be pressed against skin to perform skin treatment;
[20.3]	a supply line connected between the handpiece and the console for sequentially delivering treatment material to the handpiece from the first container or the second container;
[20.4]	a waste line connected between the handpiece and the console;

[20.5]	a vacuum source configured to create a vacuum that draws waste material from the handpiece through the waste line for disposal and that draws treatment material from either the first container or the second container to the handpiece when the tip is pressed against skin;
[20.6]	a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece, wherein the flow rate controller is located on the handpiece or on the console; and
[20.7]	a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.

Petitioner Eunsung Global Corp. (“Eunsung”) petitions for *Inter Partes*

Review of claims 1-20 (“Challenged Claims”) of U.S. Patent No. 12,053,607

(“’607 patent”).

I. REQUIREMENTS

A. Grounds for Standing

Eunsung certifies that the ’607 patent is available for IPR. This petition is being filed within one year of service of a complaint against Eunsung. Eunsung is not barred or estopped from requesting this review.

B. Challenge and Relief Requested

Eunsung requests IPR and cancellation of the Challenged Claims on the grounds below.

Ground	Claims	Basis (§103)
1A	1-5, 7, 9, 20	Karasiuk, Palmer
1B	2, 4, 20	Karasiuk, Palmer, Waldron
1C	1-20	Karasiuk, Palmer, Trueba
1D	2, 4, 12, 14, 20	Karasiuk, Palmer, Trueba, Waldron
2A	1, 3-5	Greenberg
2B	4	Greenberg, Waldron
2C	1-20	Greenberg, Trueba
2D	2, 4, 12, 14, 20	Greenberg, Trueba, Waldron

The '607 patent claims priority (not conceded) to a series of applications, the earliest filed December 30, 2005 ("Critical Date"). Applied references are §102(b) prior art:

Reference	Published Date
Karasiuk	11/13/2003
Palmer	4/6/1993
Waldron	12/31/2002
Greenberg	5/15/2003
Trueba	2/3/2004

C. Claim Construction

All claim terms should be construed according to *Phillips*. No formal claim constructions are necessary since "claim terms need only be construed to the extent necessary to resolve the controversy." *Wellman*, 642 F.3d at 1361.

Petitioner reserves the right to respond to constructions offered by Patent Owner or adopted by the Board. Petitioner does not concede that the Challenged Claims satisfy all statutory requirements, including 35 U.S.C. §§101 and 112. Petitioner has applied prior art in a manner consistent with Patent Owner's allegations of infringement.

D. Level of Ordinary Skill

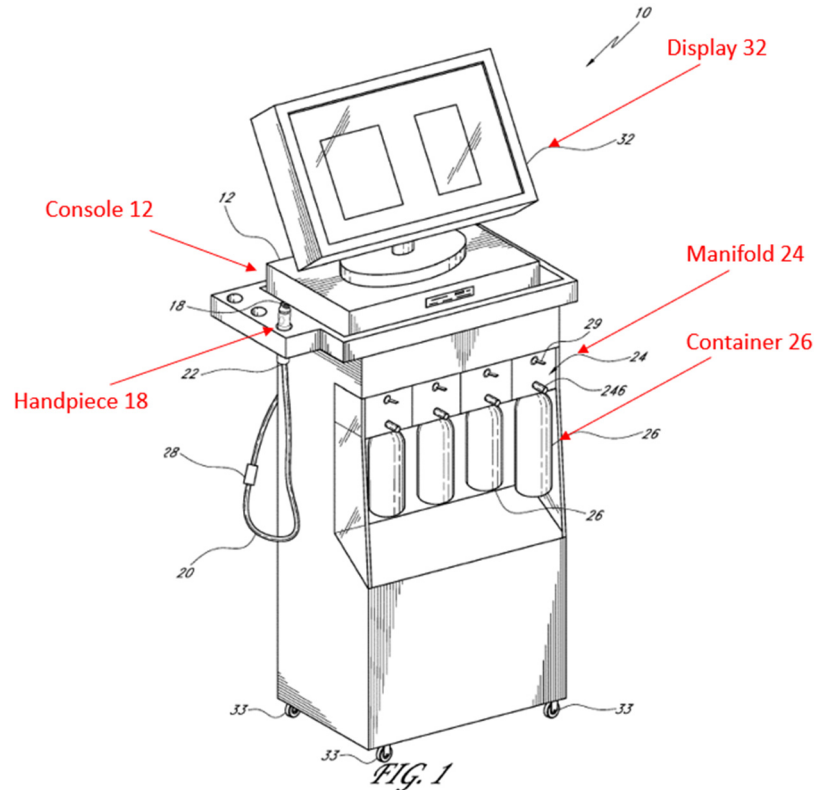
A person having ordinary skill in the art (POSITA) at the time of the alleged invention would have had an undergraduate degree (B.S.) in Mechanical Engineer-

ing or equivalent knowledge, training, or experience, with two years of work experience in the design of mechanical products, design of fluidic systems, and/or the design of devices intended for medical or cosmetological applications. Additional education or industry experience may compensate for a deficit in one of the other aspects of the requirements stated above. EUNSUNG-1003, [13]-[14].

II. '607 PATENT

A. Summary

The '607 patent describes a skin treating apparatus having a console with a user input device and a handpiece assembly. The apparatus includes a manifold system “configured to hold releasably a plurality of fluid sources and deliver fluid ... to the handpiece assembly.” EUNSUNG-1001, Abstract, FIG. 1; EUNSUNG-1003, [38]-[43]. The microdermabrasion disclosed in the '607 patent was well-known before the Critical Date. EUNSUNG-1003, [28]-[37].



'607 Patent, FIG. 1

B. Prosecution History

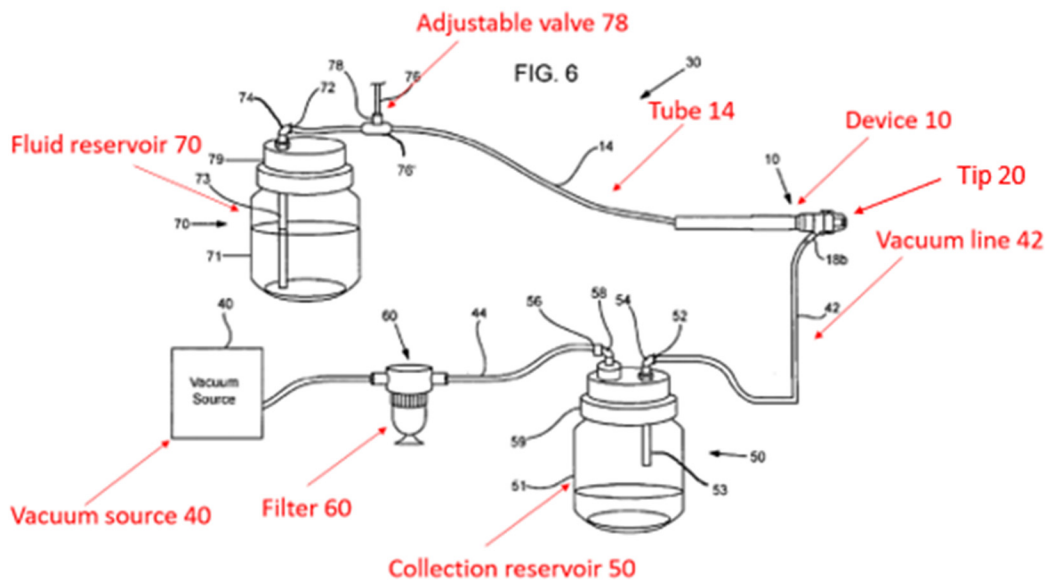
The '607 patent was allowed after one office action. EUNSUNG-1002, 164-183; EUNSUNG-1003, [44]-[47]. The action indicated allowable subject matter, and the applicant accepted it. EUNSUNG-1002, 179-182, 137-139. The examiner did not consider Palmer or Trueba. Karasiuk, Greenberg, and Waldron were buried in an IDS containing over 1,200 references. EUNSUNG-1002, 294, 311, 603, 620; *infra* §IV.A.

III. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. [GROUND 1A]: Karasiuk-Palmer

1. Karasiuk

Karasiuk's system conducts microdermabrasion procedures using a hand-piece that delivers (from fluid reservoir 70) a fluid treatment solution and retrieves the resulting waste/debris (into collection reservoir 50). EUNSUNG-1004, Abstract, [0044]-[0045], [0063]-[0066], FIG. 6; EUNSUNG-1003, [48]-[55].



Karasiuk, FIG. 6

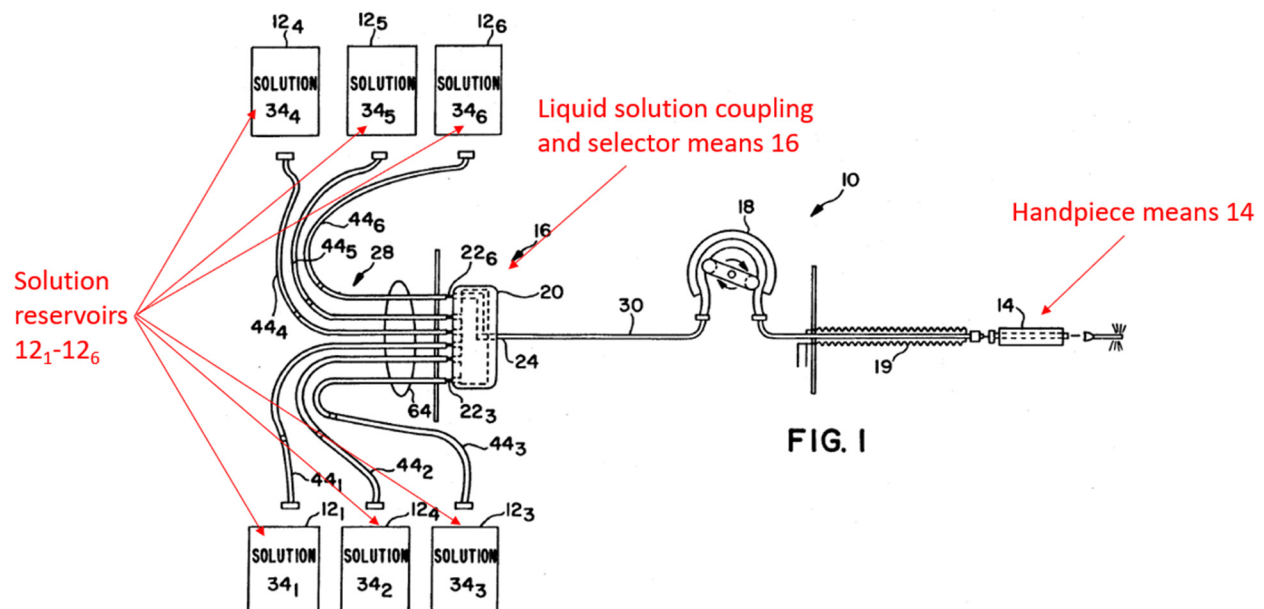
Karasiuk's system includes handpiece 10 (also referred to as "device 10"), vacuum source 40, and fluid reservoir 70. EUNSUNG-1004, [0056]. Handpiece 10 is connected to collection reservoir 50 and vacuum source 40 by a vacuum line (e.g., vacuum lines 42, 44, and/or 46), and also connected to fluid container 70 via tube 14. EUNSUNG-1004, [0059]. Handpiece 10 includes "tip 20," which contains

cannula 16 with openings 16d. EUNSUNG-1004, [0054].

In operation, “the fluid contents in fluid reservoir 70 are drawn through tube 14 and into device 10 where they flow out of the cannula 16 through openings 16d and are applied to the skin.” EUNSUNG-1004, [0063]-[0064]. “As the flow of the fluids continues out of the vacuum head base and into vacuum line 42, it carries with it the exfoliated skin particles and any other waste that is removed through the microdermabrasion process.” EUNSUNG-1004, [0066].

2. Palmer

Palmer discloses a medical device system for delivering a selected fluid treatment solution to an application site through a handpiece. EUNSUNG-1003, [56]-[59]; EUNSUNG-1005, Abstract, 4:50-68, FIG. 1.

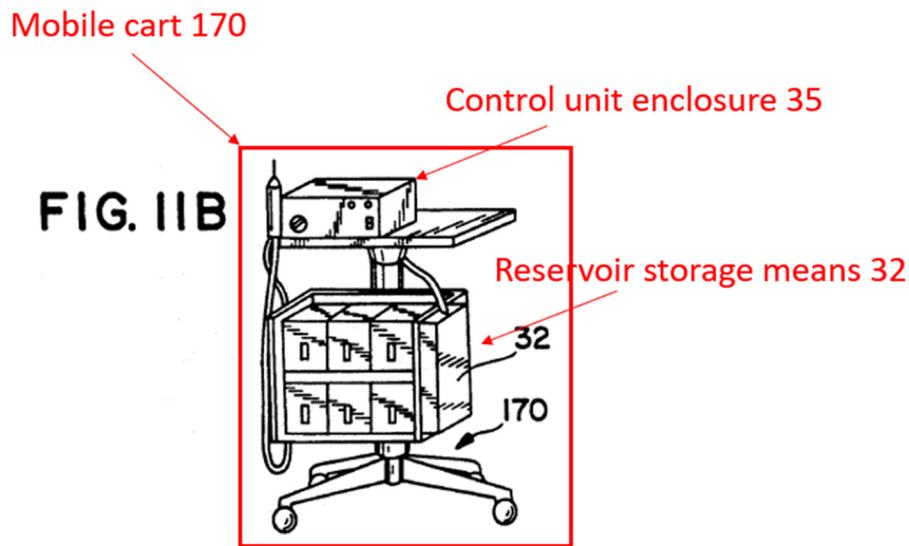


Palmer, FIG. 1

Palmer's system comprises handpiece means 14 in fluid communication

with six solution reservoirs 12 and selector means 16 for selecting the fluid container. EUNSUNG-1005, Abstract, 4:50-68.

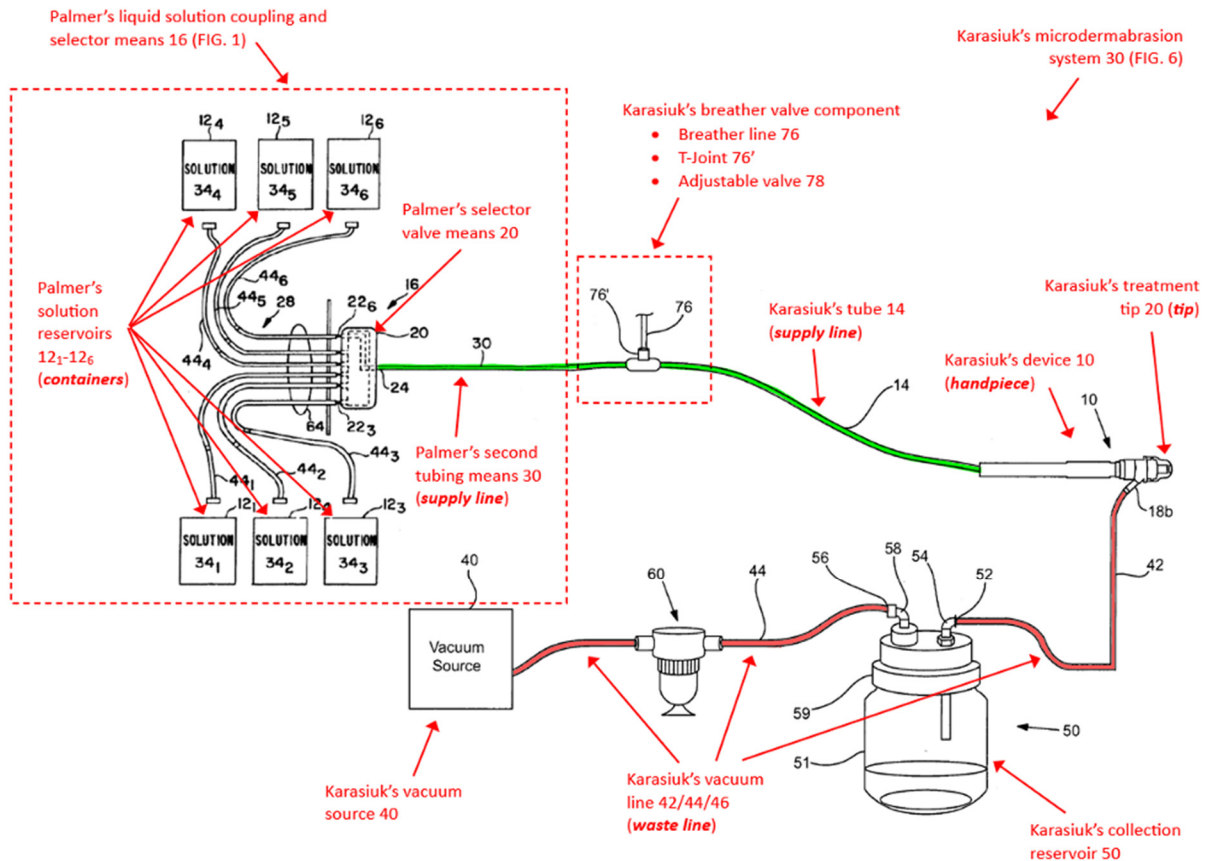
As shown in FIG. 11B, Palmer's "mobile cart 170" receives control unit enclosure 35 and "reservoir storage means 32 in the form of modular single-shelf racks" for increased portability and/or organization. EUNSUNG-1005, 9:58-10:16.



Palmer, FIG. 11B

3. Karasiuk-Palmer Combination

In Karasiuk-Palmer, Karasiuk's reservoir 70 would have been modified based on Palmer's teachings of multiple containers (e.g., reservoirs 12₁-12₆) and selector means 16, an example of which is illustrated in Modified FIG. 6. EUNSUNG-1003, [78]-[98].



Karasiuk, Modified FIG. 6

In the combination, Karasiuk's vacuum source would be used to pump treatment solutions from Palmer's multiple fluid containers and collect waste/debris. EUNSUNG-1003, [79]; EUNSUNG-1004, [0020], [0056], [0064]-[0066]. Instead of being connected to single reservoir 70, Karasiuk's tube 14 (e.g., upstream of breather line 76) would replace, or be connected to, Palmer's second tubing means 30 to achieve benefits resulting from selection of different treatment solutions. *Id.* In the resulting system, the vacuum source performs pumping the treatment solution and removing waste/debris, according to Karasiuk. *Id.*; EUNSUNG-1004,

[0020], [0056], [0064]-[0066].

Additionally, a POSITA would have been motivated and found it obvious to place (1) multiple containers and selector means (as taught by Palmer) and (2) handheld device 10, collection reservoir 50, vacuum source 40, and other relevant components (as taught by Karasiuk) in a modular structure (e.g., Palmer's mobile cart 170) for known benefits, such as increased portability and organization. EUNSUNG-1003, [80]. Palmer recognizes that "[b]y providing the reservoir storage means 32 in the form of modular single-shelf racks, a high degree of flexibility is provided." EUNSUNG-1005, 9:63-10:2, FIGS. 11A-11C. Indeed, such a modular configuration for medical devices was well-known before the Critical Date. EUNSUNG-1003, [80]-[84].

Several reasons would have prompted a POSITA to modify Karasiuk's system based on Palmer's teachings. EUNSUNG-1003, [85]-[95]. As discussed in §III.A.1, Karasiuk's system uses a handpiece for applying a fluid treatment solution to a treatment site and a vacuum for collecting waste during microdermabrasion. EUNSUNG-1004, Abstract, [0044]-[0045], [0056]-[0059], [0063]-[0066], FIG. 6; EUNSUNG-1003, [85]. Based on general knowledge and Karasiuk's disclosure, a POSITA would have recognized the desirability of using multiple types of treatment solutions during microdermabrasion. EUNSUNG-1003, [85]-[86] (discussing EUNSUNG-1013 and EUNSUNG-1016); EUNSUNG-1004, [0024]

(“other solutions or compounds offering various benefit(s).”), [0047] (“application of lotions/vitamins or other fluids”), [0061] (listing various treatment solutions). Further, Karasiuk appreciates that “various changes may be made and equivalents may be substituted without departing from the true spirit and scope of the invention.” EUNSUNG-1004, [0070]. From this disclosure and POSITA’s general knowledge, a POSITA would have been motivated to consider use of multiple containers of treatment solutions to improve the flexibility and functionality offered by Karasiuk’s system. EUNSUNG-1003, [86]-[87]; *In re Harza*, 274 F.2d 669, 671 (CCPA 1960) (mere duplication of parts carries no patentable significance). Indeed, as Mr. Simon explains, fluid delivery techniques required to use multiple containers with Karasiuk’s handpiece were well-known and part of a POSITA’s general knowledge. EUNSUNG-1003, [87]-[92] (citing EUNSUNG-1005, EUNSUNG-1008, EUNSUNG-1007, EUNSUNG-1011, EUNSUNG-1020).

With this motivation and knowledge, a POSITA would have investigated other references such as Palmer to achieve benefits offered by multiple treatment solutions. EUNSUNG-1003, [93]. **First**, a POSITA would have been motivated to modify Karasiuk based on Palmer’s multiple containers and selector means to allow easy selection among multiple treatment solutions. EUNSUNG-1003, [93]; EUNSUNG-1005, 1:30-53, 2:48-4:2. Palmer recognizes that “[c]onventional irrigation arrangements...generally do not provide the opportunity of easy selection

among several irrigant solutions.” EUNSUNG-1005, 1:30-53. “If circumstances require the use of a different treatment solution, ... the solution remaining in the tank is usually discarded and the tank must be cleaned and refilled with the new solution,” which “is time-consuming and costly, not to mention messy.” *Id.* Palmer’s solution with multiple containers and selector means addresses this problem. EUNSUNG-1005, Abstract, 2:48-4:2, cl.1, FIG. 1; EUNSUNG-1003, [93].

Second, the combination would enable sequential delivery of different treatment solutions. EUNSUNG-1003, [94]. In this regard, Palmer discloses “[w]hen treatment with the particular irrigating solution is completed, the system can be either switched to another solution,” so that “a patient may be treated with two or more solutions during the same procedure, one after the other.” EUNSUNG-1005, 11:9-12, 6:46-51.

Third, the combination would minimize refilling downtime because when a particular container runs out mid-operation, the combined system can quickly switch to a second container to keep the supply flowing. EUNSUNG-1003, [95]; EUNSUNG-1011, 2:7-10.

Fourth, a POSITA would have been motivated to adopt Palmer’s modular design to provide added flexibility, organization, and portability. EUNSUNG-1003, [96]; EUNSUNG-1005, 9:58-10:2. Palmer discloses “[b]y providing the reservoir storage means 32 in the form of modular single-shelf racks, a high degree of

flexibility is provided” and “the reservoir storage means can be placed on a countertop 168 (FIG. 11A), or on a mobile cart 170 (FIG. 11B) or in a cabinet 172 underneath a counter (FIG. 11C).” EUNSUNG-1005, 9:58-10:2. A POSITA would have viewed these modular/mobile benefits of Palmer as applicable to microdermabrasion systems like Karasiuk’s, and would have been motivated to use Palmer’s console design in the microdermabrasion system resulting from the combination. EUNSUNG-1003, [96].

A POSITA would have had a reasonable expectation of success in such a combination. EUNSUNG-1003, [97]-[98]. Both Karasiuk and Palmer are directed to medical devices that deliver treatment solutions to treatment sites via a hand-piece. *Id.*, [97]; EUNSUNG-1004, Abstract, [0013]-[0015], FIG. 6; EUNSUNG-1005, Abstract, 1:10-15, FIG. 1; EUNSUNG-1006, [0003]; EUNSUNG-1001, 6:53-56. Although Palmer describes an example of dental work, Palmer’s disclosure “relates generally to methods and apparatus for delivering liquid solutions to treatment sites.” EUNSUNG-1005, 1:10-11. From this, a POSITA would have understood and found obvious that Palmer’s teachings are applicable to delivering fluids for other medical procedures (e.g., microdermabrasion). EUNSUNG-1003, [97]. As Mr. Simon noted, by the Critical Date, fluid delivery systems and techniques were largely compatible and were used interchangeably across various applications without undue experimentation. *Id.* (citing EUNSUNG-1011).

Replacement of Karasiuk's reservoir 70 with Palmer's multiple containers and selector means reflects a simple substitution of a known element for another to obtain predictable results—allowing selection of different treatment solutions. EUNSUNG-1003, [98]. This replacement would also reflect the use of a known technique to improve similar devices in the same way. *Id.*

4. Claim 1

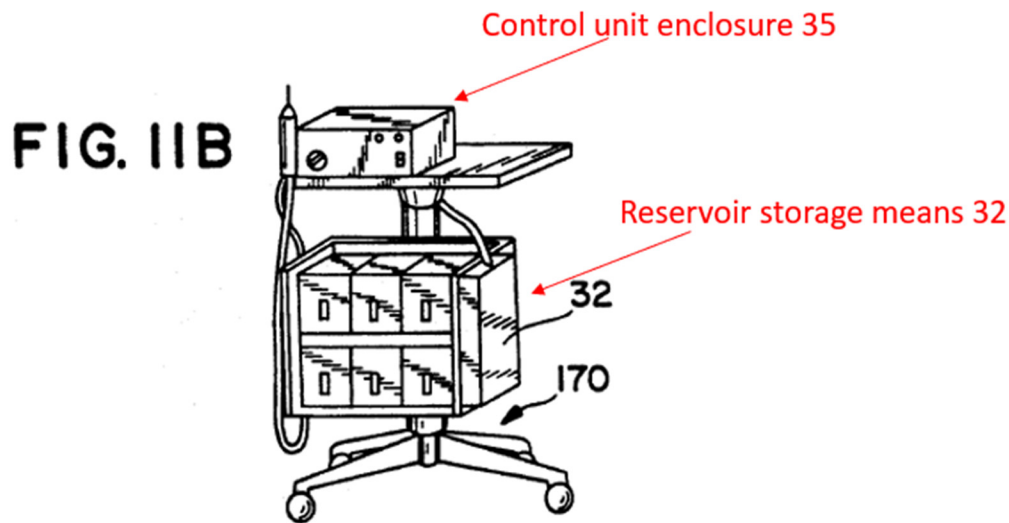
[1.pre] A skin treatment system, comprising:

To the extent the preamble is limiting, Karasiuk describes “microdermabrasion device, ***microdermabrasion system*** employing the device.” EUNSUNG-1004, [0014], Abstract, FIG. 6; EUNSUNG-1003, [99]; *see* §III.A.3.¹

[1.1] a console configured to receive a first container containing a first treatment material and a second container containing a second treatment material;

The Karasiuk-Palmer system includes a ***console*** in the form of, for example, “mobile cart 170” that receives Palmer's multiple containers (reservoir storage means 32 receiving multiple reservoirs) and selector means (control unit enclosure 35), and also receives Karasiuk's handheld device 10, collection reservoir 50, vacuum source 40, and other relevant components in a modular structure. §III.A.3; EUNSUNG-1005, 9:58-10:2, FIGS. 11A-11C; EUNSUNG-1003, [100]-[114].

¹ All emphasis is added unless indicated otherwise.



Palmer, FIG. 11B

This aligns with the '607 patent's disclosure of a console that receives multiple containers, valve system, handpiece, vacuum pump, and waste container, and is placed on four casters for "easy movement." EUNSUNG-1001, 14:38-48, 9:18-20, 18:38-55, 11:5-6, 6:6-14, 7:47-48; EUNSUNG-1003, [103].

Further, a POSITA would have been motivated and found it obvious to place Karasiuk-Palmer's system in a console for known benefits, such as increased portability and organization. EUNSUNG-1003, [104]. Indeed, as Mr. Simon explains, using a console to house similar medical devices was well-known and would have been within a POSITA's general knowledge. EUNSUNG-1003, [104]-[108] (discussing EUNSUNG-1010, EUNSUNG-1005, EUNSUNG-1011, EUNSUNG-1020). A POSITA would have had a reasonable expectation of success in placing Karasiuk-Palmer's components in a console, as it would constitute the use of a

known technique to improve similar devices in the same way. *Id.*

Again, Karasiuk-Palmer describes six solution reservoirs in the modular structure (*console*), two of which would have been understood as *first and second containers* received at the console. EUNSUNG-1003, [109]; §III.A.3. Palmer’s reservoirs each include “a respective liquid solution” with a unique color coding. EUNSUNG-1005, 4:53-57, 5:37-6:32; EUNSUNG-1003, [110]. Karasiuk also recognizes the desirability of using multiple types of skin treatment solutions during microdermabrasion. EUNSUNG-1003, [111]; EUNSUNG-1004, [0024], [0047], [0061]. In Karasiuk-Palmer, it would have been obvious to use Palmer’s multiple containers to hold different treatment fluids (*first and second treatment materials*), as taught by Karasiuk and Palmer—for example, a first container holding an anti-oxidant formulation and a second container holding a hydrating formulation. EUNSUNG-1003, [113] (discussing EUNSUNG-1004, EUNSUNG-1005, EUNSUNG-1013, and EUNSUNG-1016).

[1.2] a handpiece configured to couple to a tip that can be pressed against skin to perform skin treatment;

Karasiuk-Palmer includes a handpiece configured to couple to a tip that can be pressed against skin to perform skin treatment, such as Karasiuk’s “[d]evice 10” (FIG. 6) designed to be “**handheld by a user** for its application to the skin of a patient.” EUNSUNG-1004, [0044]-[0047], [0063]; EUNSUNG-1003, [115]-[120].

Karasiuk’s device 10 (*handpiece*) includes “vacuum head base 18,” upon

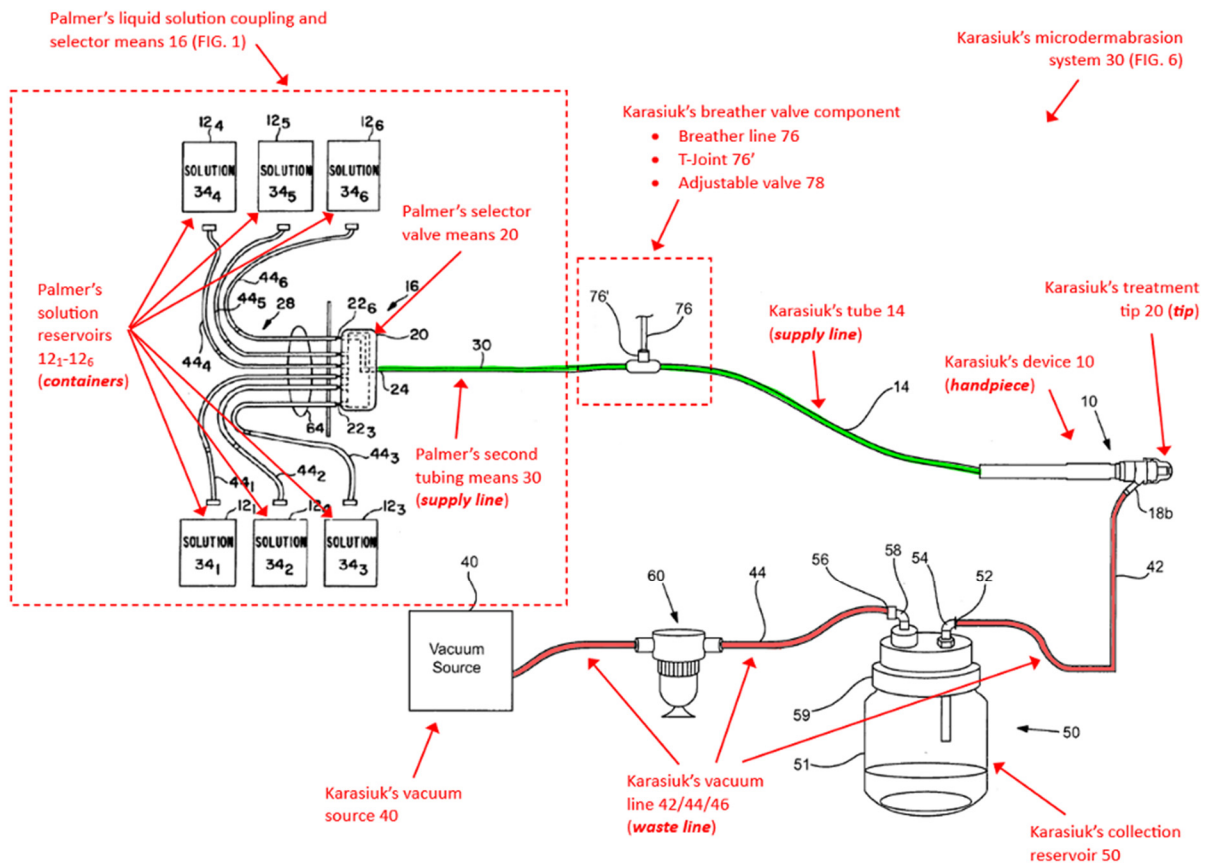
which “*treatment tip 20* is fitted over the end of.” EUNSUNG-1004, [0044]-[0048]. Treatment tip 20 is *coupled* to vacuum head base 18 through a “friction fit and/or provided with treads or other attachment means to provide a pressure tight fit between the components.” *Id.* Karasiuk describes treatment tip 20 as “smooth surfaced and adapted to glide over the skin surface” and further states that “device 10 is positioned so as to place tip 20 *in contact with the skin surface* to be micro-abraded.” EUNSUNG-1004, [0047], [0063]-[0064], [0069].

Karasiuk discloses alternative embodiments in which treatment “tip 20 may be integrally machined or molded with vacuum head base 18,” which in turn mates with cannula 16. EUNSUNG-1004, [0048], [0068]. Thus, in these embodiments, treatment tip 20, vacuum head base 18, and cannula 16 collectively correspond to the claimed tip. EUNSUNG-1003, [119]; EUNSUNG-1004, [0042] (“The term ‘tip’ refers to the end of a structure or assembly. As used herein, the applicator tip is that component, whether integral or attachably fixed to the device, which is the endmost extremity of the device and is used in contacting the skin.”), [0045], [0048], [0068], FIGS. 1-2.

[1.3] a supply line connected between the handpiece and the console for sequentially delivering treatment material to the handpiece from the first container or the second container;

In Karasiuk-Palmer, Karasiuk’s device 10 (*handpiece*) is connected to Palmer’s selector valve means 20, which is stored in control unit enclosure 35 on

Palmer's mobile cart 170 (*console*), through *a supply line* comprising Karasiuk's "tube 14" and Palmer's "second tubing means 30." EUNSUNG-1004, [0054], FIG. 1; EUNSUNG-1005, 5:10-18; EUNSUNG-1003, [121]-[138]; *see* §III.A.3. The supply line in the Karasiuk-Palmer combination is depicted below in green.



Karasiuk, Modified FIG. 6

As Mr. Simon explains, "[b]ecause Palmer's selector valve means 20 is located in control unit enclosure 35 on Palmer's mobile cart 170, a POSITA would have understood that the supply line in the Karasiuk-Palmer combination is '*connected between*' Karasiuk's device 10 and Palmer's mobile cart 170." EUNSUNG-

1003, [125]-[126]. Should Patent Owner argue that a supply line connected to a component located within or upon a console is not “connected between the handpiece and the console,” Petitioner submits that such an interpretation of limitation 1.3 is not supported by the ’607 patent’s disclosure. EUNSUNG-1003, [125]-[126].² Even if it was, it would have been obvious to connect Karasiuk-Palmer’s supply line to an intermediate component, such as a port or receiver, on Palmer’s mobile cart 170 before ultimately connecting to other components located within or upon the console. EUNSUNG-1003, [127]-[131].³

² The ’607 patent states that line 20, which includes the supply line/input line 52 and waste line/output line 50, “is configured to provide fluid communication between the containers 26 and the handpiece assembly 18.” EUNSUNG-1001, 5:64-66; *see also id.*, 19:29-59. “The line 20 can comprise one or more conduits extending between the console 12 and the handpiece assembly 18.” *Id.*, 5:66-6:1. The ’607 patent does not describe nor depict either line connecting to an intermediate component, such as a port or receiver, on the console. *See id.*, 5:64-6:13, 19:29-59, FIGS. 1, 16.

³ As Mr. Simon explains, “choosing to connect supply and waste lines to an intermediate component, such as a port or receiver on the console, before ultimately connecting to other components located within or upon the console would have

As discussed in §III.A.3, Karasiuk-Palmer replaces Karasiuk's reservoir 70 with Palmer's multiple reservoirs and "liquid solution coupling and selector means 16" to allow selection of different treatment solutions. EUNSUNG-1003, [134]-[135]. As discussed in [1.1], the reservoirs in the combination (*first and second containers*) contain different solutions (*first and second treatment materials*). EUNSUNG-1005, 4:50-63; EUNSUNG-1003, [109]-[113].

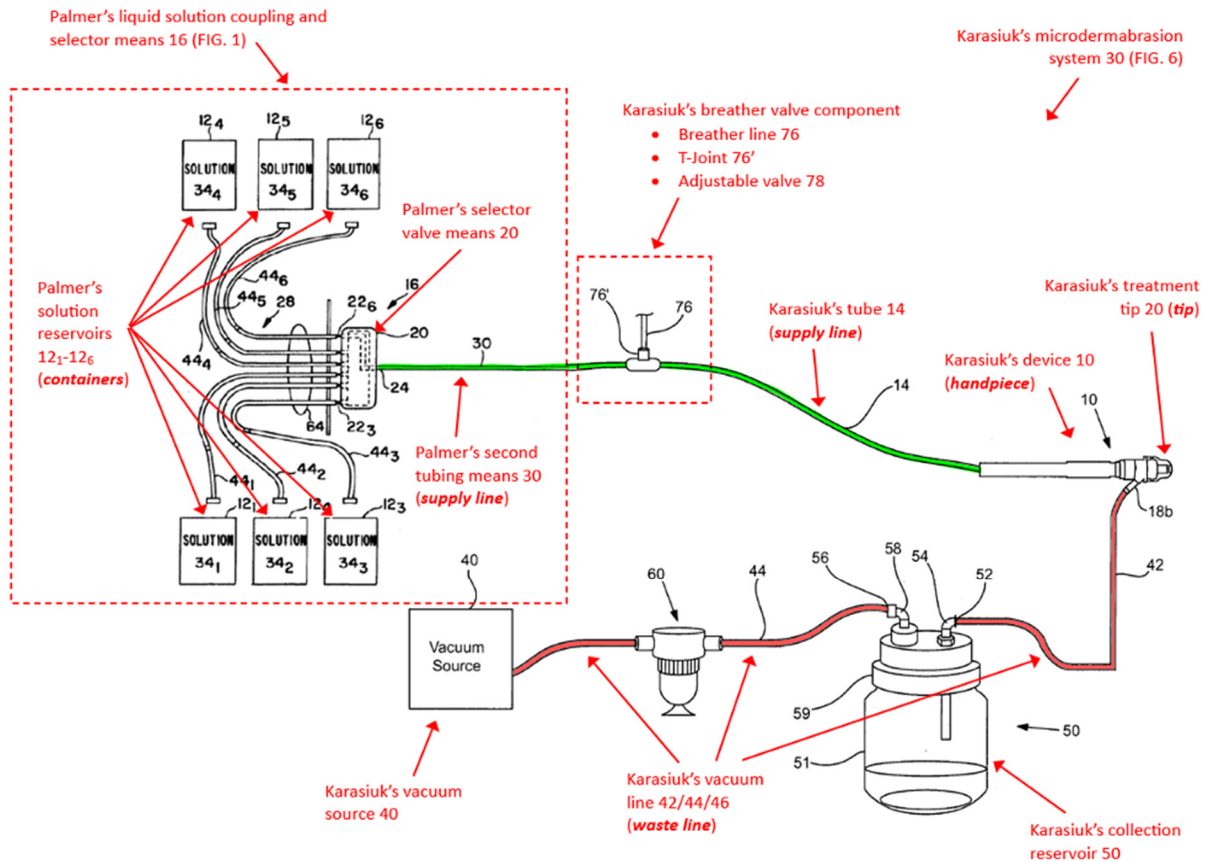
Karasiuk-Palmer renders obvious delivering treatment material sequentially. EUNSUNG-1003, [133]-[137]. Karasiuk discloses that upon forming a vacuum loop, the fluid contents in the fluid reservoir are "drawn through tube 14 and into

been an obvious design choice." EUNSUNG-1003, [128]. The modification "would not result in any functional differences, would be well within the knowledge and skill of a POSITA, and would yield expected results." *Id.* It would also reflect the use of a known technique of arranging supply and waste lines in a microdermabrasion system to improve similar devices in the same way. *Id.* Indeed, it was within the general knowledge of a POSITA to connect supply and waste lines between a handpiece and an intermediate component, e.g., a port or receiver, on the console before the critical date of the '607 patent. *Id.* (discussing EUNSUNG-1028).

device 10...and are applied to the skin.” EUNSUNG-1004, [0064]. In operation, “a patient may be treated with two or more solutions during the same procedure, **one after the other**,” and “[w]hen treatment with the particular irrigating solution is completed, **the system can be ... switched to another solution**.” EUNSUNG-1005, 6:46-51, 11:9-12. Karasiuk recognizes desirability of using multiple types of skin treatment solutions during microdermabrasion. EUNSUNG-1003, [135]; EUNSUNG-1004, [0024], [0047], [0061]. Therefore, the Karasiuk-Palmer system would have used Palmer’s multiple containers to *sequentially* deliver different skin treatment solutions—for example, a first container holding an antioxidant formulation (e.g., vitamin) and a second container holding a hydrating formulation (e.g., lotion). EUNSUNG-1003, [133]-[137].

[1.4] a waste line connected between the handpiece and the console; and

In Karasiuk-Palmer, Karasiuk’s device 10 (*handpiece*) is connected to Karasiuk’s “collection reservoir 50” (i.e., a waste container) and “vacuum source 40” through a vacuum line (e.g., collectively vacuum line 42, second vacuum line 44, vacuum line 46) (respectively or collectively *waste line*). EUNSUNG-1004, [0056]-[0057]; EUNSUNG-1003, [139]-[144]. The waste line in the Karasiuk-Palmer combination is depicted below in red.



Karasiuk, Modified FIG. 6

As discussed in §III.A.3, a POSITA would have been motivated to place Karasiuk's collection reservoir 50 and vacuum source 40 in Palmer's mobile cart 170 (*console*) to provide added flexibility, organization, and portability. EUN-SUNG-1003, [101]-[109], [142]. As Mr. Simon explains, "[b]ecause Karasiuk's collection reservoir 50 is located in Palmer's mobile cart 170, a POSITA would have understood that the waste line in the Karasiuk-Palmer combination is '*connected between*' Karasiuk's device 10 and Palmer's mobile cart 170. EUNSUNG-1003, [142].

Should Patent Owner argue that a waste line connected to a component located within or upon a console is not “connected between the handpiece and the console,” Petitioner submits that such an interpretation of limitation 1.4 is not supported by the ’607 patent’s disclosure. EUNSUNG-1003, [142]-[143].⁴ Even if it was, it would have been obvious to connect Karasiuk-Palmer’s waste line to an intermediate component, such as a port or receiver, on Palmer’s mobile cart 170 before ultimately connecting to other components located within or upon the console. EUNSUNG-1003, [144].⁵

[1.5] a vacuum source configured to create a vacuum that draws waste material from the handpiece through the waste line for disposal and that draws treatment material from either the first container or the second container to the handpiece when the tip is pressed against skin.

Karasiuk describes ***a vacuum source 40*** configured to create a vacuum used in performing microdermabrasion. EUNSUNG-1004, [0021], [0038], [0056]-[0058], [63]; EUNSUNG-1003, [146]-[150]. In Karasiuk-Palmer, when ***tip 20*** of Karasiuk’s device 10 (***handpiece***) is placed in contact with a skin surface to be microabraded, a vacuum loop is formed, and Karasiuk’s ***vacuum source 40*** draws the treatment material from one of Palmer’s six reservoirs 12₁-12₆ (***first container*** or ***second container***) through Karasiuk’s tube 14 into device 10 and draws away from

⁴ See *supra* note 2.

⁵ See *supra* note 3.

device 10 exfoliated skin particles and other waste through vacuum line 42 (*waste line*) into collection reservoir 50 *for disposal*. EUNSUNG-1004, [0063]-[0066]; §III.A.3; EUNSUNG-1003, [146]-[150].

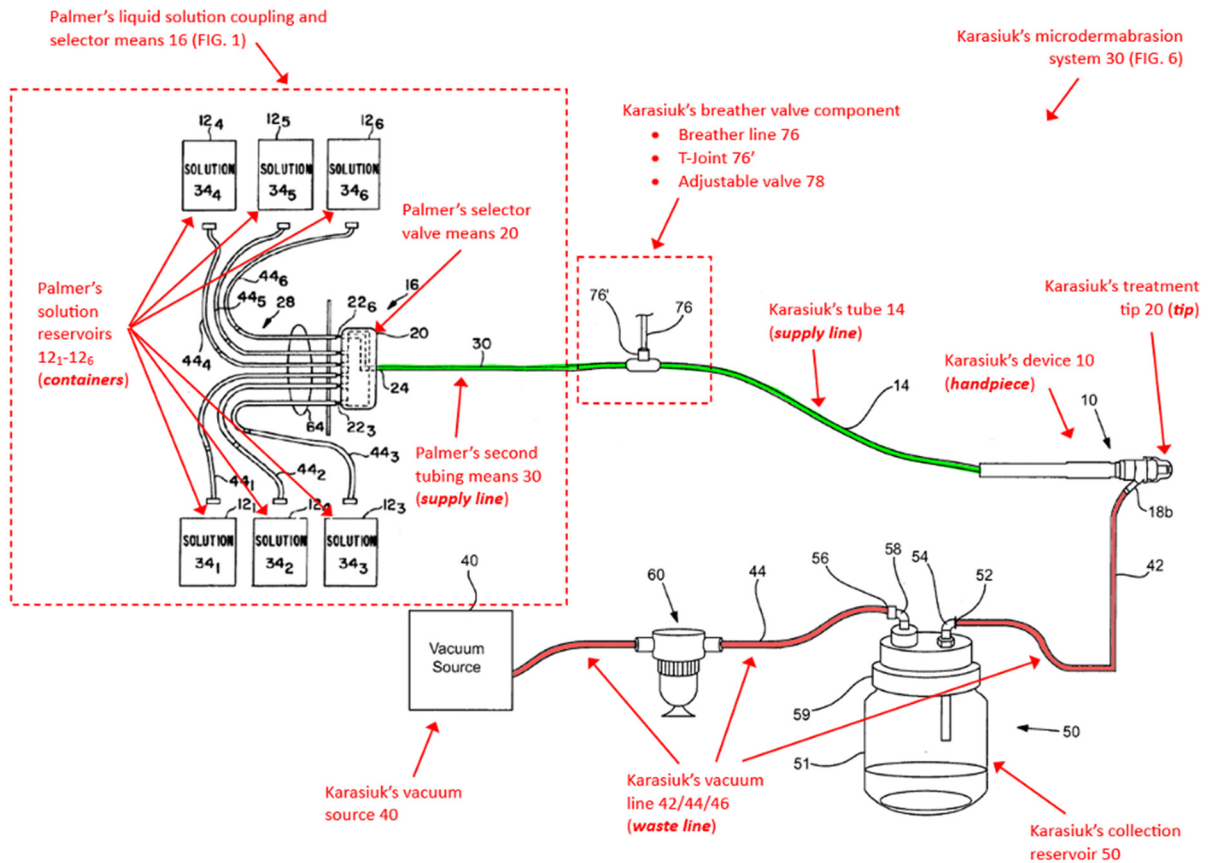
5. Claims 2, 3

[2.1] [3] . . . a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece.

Karasiuk-Palmer renders obvious this claim limitation in three ways. EUNSUNG-1003, [155]-[170]. *First*, in Karasiuk-Palmer, **Palmer's selector valve means 20** is used to select flow of the first treatment material contained in, for example, Palmer's reservoir 12₁ or the second treatment material contained in, for example, Palmer's reservoir 12₂ to the handpiece (e.g., Karasiuk's device 10). EUNSUNG-1003, [159]-[162]; EUNSUNG-1005, 7:49-8:5. A POSITA would have understood Palmer's selector valve means 20 as adjusting a flow rate of the first treatment material or the second treatment material by selecting whether the respective treatment materials are delivered to the handpiece. EUNSUNG-1003, [159]-[162].

Second, Karasiuk discloses a **breather valve component** located on tube 14, comprising breather line 76, T-Joint 76', and adjustable valve 78. EUNSUNG-1003, [163]-[165]; EUNSUNG-1004, [0059]. Adjustable valve 78 "var[ies] [the] amount of air that is allowed into the tube 14" through "breather line 76." EUNSUNG-1004, [0059], FIG. 6; EUNSUNG-1003, [165]. A POSITA would have recognized that varying the amount of air allowed into Karasiuk's tube 14 also varies

the amount of treatment material drawn from Palmer's solution reservoirs into the handpiece by the vacuum source. EUNSUNG-1003, [165].



Karasiuk, Modified FIG. 6

Third, Karasiuk further describes an additional “valve or other flow control mechanism [that] may be provided in fluid delivery line 14 to control the amount of liquid passing through the line.” EUNSUNG-1004, [0059]; EUNSUNG-1003, [166]-[169]. Karasiuk explains that this “valve or other flow control mechanism” (hereinafter “**second valve**”) may be provided in addition or as an alternative to the breather line component. EUNSUNG-1004, [0059]; EUNSUNG-1003, [166]. A

POSITA would have appreciated that Karasiuk's second valve could take the form of a variety of well-known valves, including, for example, a ball valve, globe valve, needle valve, or pinch valve. EUNSUNG-1003, [169].

6. Claims 2, 4

[2.1] [4] . . . wherein the flow rate controller is located on the handpiece.

As discussed in [3], Karasiuk discloses two components, both of which may be considered flow rate controllers: the breather valve component and an unlabeled second valve. EUNSUNG-1003, [171]. Apart from being somewhere on fluid delivery line/tube 14, Karasiuk does not explicitly disclose where either component is located. *See id.*; EUNSUNG-1004, [0059].

In the Karasiuk-Palmer combination, it would have been obvious to a POSITA to locate Karasiuk's breather valve or second valve on Karasiuk's device 10 (*handpiece*) for three reasons. EUNSUNG-1003, [171]-[179]. **First**, locating Karasiuk's breather valve or second valve on device 10 would have been an obvious design choice because it is merely the rearrangement of parts without any "difference in function" or "unexpected results." EUNSUNG-1003, [173]-[175].⁶ As

⁶ *In re Rice*, 341 F.2d 309, 314 (CCPA 1965); *see also, e.g., In re Japikse*, 181 F.2d 1019 (CCPA 1950) (holding that claims to a hydraulic power press which read on the prior art, except with regard to the position of the starting switch, were

evidenced by Waldron⁷ and Pond, locating Karasiuk’s breather valve or second valve on the handpiece yields expected results without altering the function of the Karasiuk-Palmer system, and thus would have been “an obvious matter of design choice within the skill of the art.” *Id.* (discussing EUNSUNG-1033; EUNSUNG-1007); *Kuhle*, 526 F.2d at 555.

Second, locating Karasiuk’s breather valve or second valve on device 10 would have been obvious to try. EUNSUNG-1003, [176]. A POSITA would have recognized a finite number of identified, predictable locations to locate Karasiuk’s breather valve or second valve: (1) at a component in the console where the supply line emanates from—similar to Palmer’s selector valve means 20 (EUNSUNG-1005, 5:10-22, 7:49-8:5, 8:6-21), (2) at some position along the supply line as it traverses between the console and the handpiece—e.g., as depicted in Karasiuk’s FIG. 6, or (3) contained somewhere within the handpiece itself—e.g., similar to Waldron’s valve 52 (EUNSUNG-1033, 5:42-52, FIG. 12) and Pond’s pinch valve

unpatentable because ***shifting the position of the starting switch would not have modified the operation of the device***); *In re Kuhle*, 526 F.2d 553 (CCPA 1975) (holding that the particular placement of a contact in a conductivity measuring device was an obvious matter of design choice); *see also* MPEP § 2144.04(VI)(C).

⁷ *See infra* §III.B.1 for a background discussion of Waldron.

86 (EUNSUNG-1007, 8:8-24, FIG. 15). EUNSUNG-1003, [176]. A POSITA would have had “good reason to pursue the known options,” and thus, locating Karasiuk’s breather valve or second valve on the handpiece would have been obvious to try. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007); EUNSUNG-1003, [176].

Third, a POSITA would have been motivated to locate Karasiuk’s breather valve or second valve at the handpiece (e.g., along supply line 14 as it travels through device 10’s handle 12). EUNSUNG-1003, [177]-[179]. A POSITA would have recognized the desirability of being able to easily control the flow rate of the treatment material while performing a microdermabrasion treatment. EUNSUNG-1003, [178]. A POSITA would have appreciated that it is more accessible and convenient for an operator to adjust a flow rate controller mounted on a device that the operator is already holding than having to reach to a flow rate controller mounted in another location (e.g., on a console). EUNSUNG-1003, [177] (citing EUNSUNG-1033, 5:51-52). Indeed, as Mr. Simon explains, “a POSITA would have understood that locating the flow rate controller on the handpiece is more convenient for the operator than placing it on a console and results in faster, more effective, and safer treatments.” EUNSUNG-1003, [177].

A POSITA would have also appreciated the advantage of locating

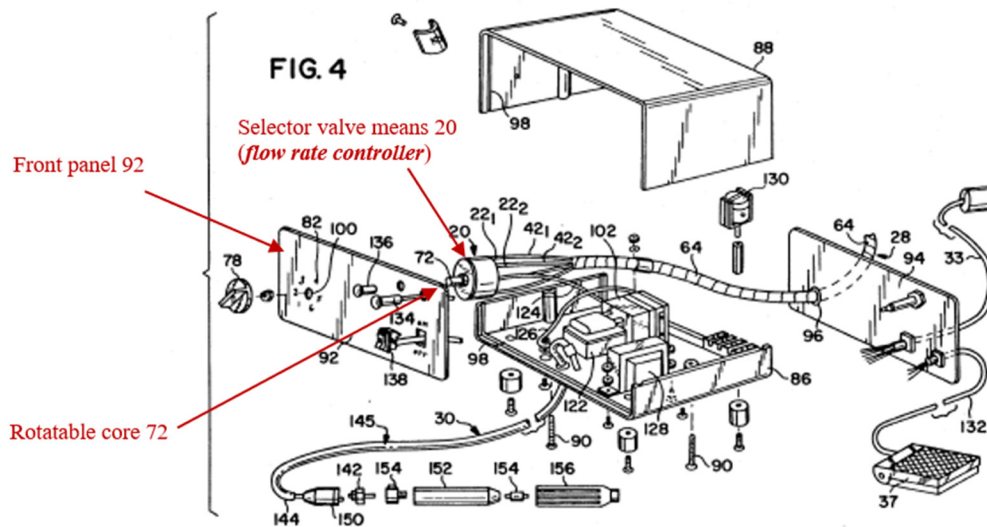
Karasiuk's breather valve or second valve in or on a structure, like Karasiuk's device 10, to provide structural support for the valve while preventing fouling and damage. EUNSUNG-1003, [179].

7. Claims 2, 5

[2.1] [5] . . . wherein the flow rate controller is located on the console.

As discussed in [3], Palmer discloses selector valve means 20, and Karasiuk discloses a breather valve component and a second valve—all of which may be considered flow rate controllers. EUNSUNG-1003, [181], [183].

A POSITA would have understood Palmer's selector valve means 20 (*flow rate controller*) as being located on Palmer's mobile cart 170 (*console*). EUNSUNG-1003, [181]-[183]. Palmer teaches that "rotatable core 72" of selector valve means 20 is placed through "front panel 92" of "control unit enclosure 35," which may be placed on mobile cart 170. EUNSUNG-1005, 8:6-39, Fig. 4, 9:58-10:16.



Palmer, FIG. 4

Alternatively, in the Karasiuk-Palmer combination, it would have been obvious to a POSITA to place Karasiuk's breather valve or second valve (*flow rate controllers*) on Palmer's mobile cart 170 (*console*) (e.g., in Palmer's control unit enclosure 35) for three reasons. EUNSUNG-1003, [184]-[187].

First, locating Karasiuk's breather valve or second valve on Palmer's mobile cart 170 would have been an obvious design choice because it is merely the rearrangement of parts without any "difference in function" or "unexpected results." EUNSUNG-1003, [185].⁸ Given that Palmer locates other components that interface with and control the flow of treatment material through the supply line at the

⁸ See cases cited *supra* note 6.

console (e.g., Palmer's selector valve means 20), locating Karasiuk's breather valve or second valve on Palmer's mobile cart 170 yields expected results without altering the function of the Karasiuk-Palmer system. *Id.* Moreover, a POSITA would have known that similar prior art microdermabrasion systems include a flow rate controller located on a console. *Id.* (citing EUNSUNG-1028, FIG. 9). Indeed, Karasiuk itself suggests locating the breather valve on the container side of tube 14. *Id.*; EUNSUNG-1004, [0059] ("Alternatively, a breather line or input with adjustment valve may be located on elbow 74 or directly on manifold cover 79 [of reservoir 70]."). Thus, choosing to locate Karasiuk's breather valve or second valve on Palmer's mobile cart 170 would have been "an obvious matter of design choice within the skill of the art." EUNSUNG-1003, [185]; *Kuhle*, 526 F.2d at 555.

Second, locating Karasiuk's breather valve or second valve on Palmer's mobile cart 170 would have been obvious to try. EUNSUNG-1003, [186]. A POSITA would have recognized a finite number of identified, predictable locations along Karasiuk-Palmer's supply line for Karasiuk's breather valve or second valve: (1) at a component in the console where the supply line emanates from—similar to Palmer's selector valve means 20 (EUNSUNG-1005, 5:10-22, 7:49-8:5, 8:6-21), (2) at some position along the supply line as it traverses between the console and the handpiece—e.g., as depicted in Karasiuk's FIG. 6, or (3) contained somewhere within the handpiece itself—e.g., similar to Waldron's valve 52 (EUNSUNG-1033,

5:42-52, FIG. 12) and Pond's pinch valve 86 (EUNSUNG-1008, 8:8-24, FIG. 15).

EUNSUNG-1003, [186]. A POSITA would have had "good reason to pursue the known options," and thus, locating Karasiuk's breather valve or second valve on Palmer's mobile cart 170 (e.g., in control unit enclosure 35) would have been obvious to try. *Id.*; *KSR*, 550 U.S. at 421.

Third, a POSITA would have been motivated to locate Karasiuk's breather valve or second valve on Palmer's mobile cart 170 for added portability and organization. EUNSUNG-1003, [187]. As Mr. Simon explains, using a console to house similar medical devices was well-known and would have been within a POSITA's general knowledge. EUNSUNG-1003, [187], [104]-[108]. Moreover, Karasiuk itself suggests placing a flow rate controller on/near the supply container. *Id.*, [187]; EUNSUNG-1004, [0059]. Locating Karasiuk's breather valve or second valve on Palmer's mobile cart 170 also would have been the use of a known technique to improve similar devices in the same way. EUNSUNG-1003, [187].

8. Claims 2, 7

[2.2] [7] . . . a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.

Palmer discloses a "selector knob 78," located on front panel 92 of control unit enclosure 35, which is fastened to rotatable core 72 of selector valve means 20. EUNSUNG-1003, [189]-[193]; EUNSUNG-1005, 7:49-8:53. A user rotates selector knob 78 to align with one of the indicia 82 on front panel 92 corresponding

9. Claim 9

[9] The system of claim 7, wherein the user input device is positioned on the console.

As discussed in [7], Palmer's selector knob 78 (*user input device*) is positioned on the front panel of control unit enclosure 35. EUNSUNG-1003, [194]-[196]; EUNSUNG-1005, 8:31-56, FIG. 4. Control unit enclosure 35 is located on Palmer's mobile cart 170 (*console*). EUNSUNG-1005, 9:58-10:16, FIG. 11B.

10. Claim 20

Claim 20 claims similar subject matter recited in claims 1 and 2. EUNSUNG-1003, [197]. The combination of Karasiuk and Palmer renders these claim features obvious for similar reasons discussed with respect to claims 1 and 2. EUNSUNG-1003, [198]-[207]; *see* §§III.A.4-8.

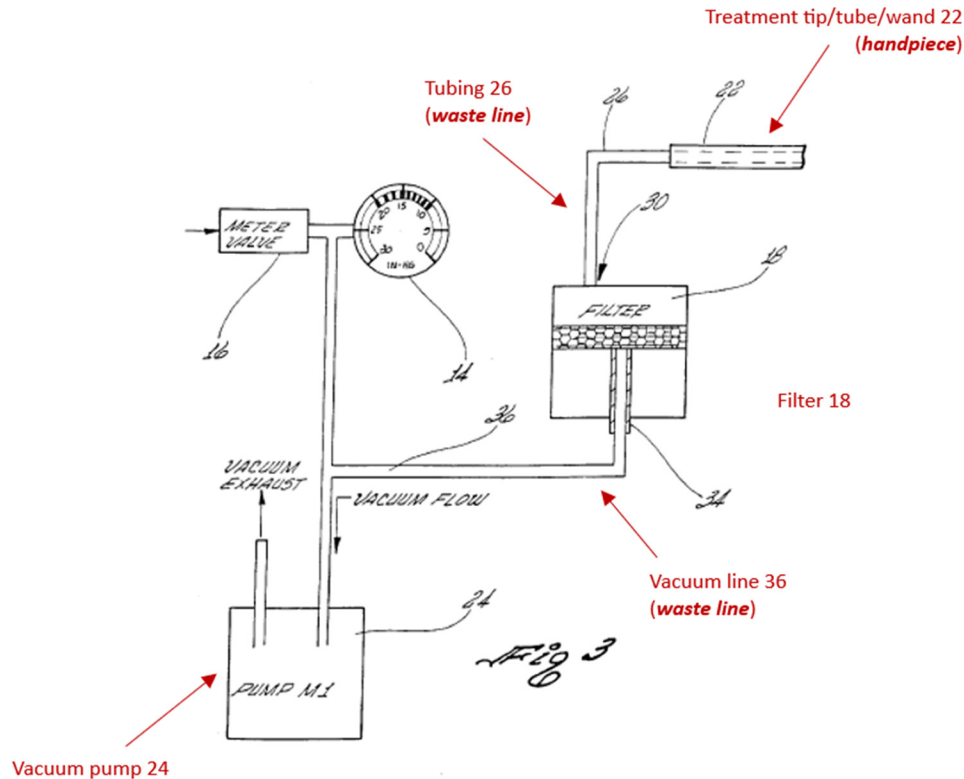
B. [GROUND 1B]: Karasiuk-Palmer-Waldron

1. Waldron

Similar to Karasiuk and Palmer, Waldron relates to “[a] treatment tool and tissue collection system.” EUNSUNG-1003, [60]-[66]; EUNSUNG-1033, Abstract. Specifically, Waldron describes a “device for microdermabrasion,” in which an “abrasive coated tip is moved over the skin surface while a vacuum is applied through the tube to the skin surface to remove cells abraded from the skin surface.” *Id.*, 2:47-52.

Waldron's system, illustrated below in Figure 3, includes “treatment tip 22”

(also referred to as “tube 22” or “wand 22”) that is connected to “vacuum pump 24” through “tubing 26,” “filter 18,” and “vacuum line 36.” *Id.*, 3:54-4:7.

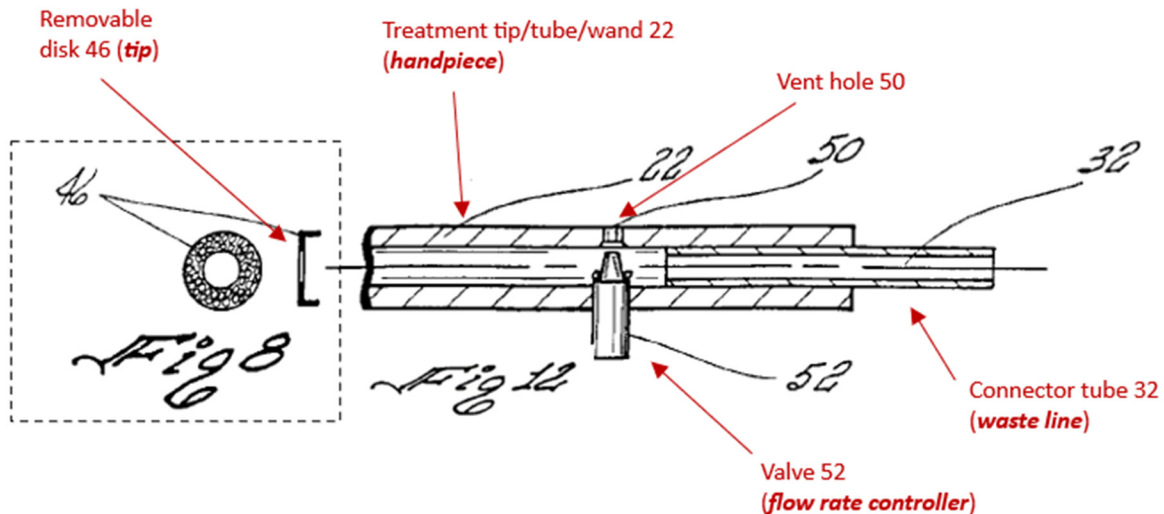


Waldron, FIG. 3

Waldron discloses several different embodiments of treatment tip 22. EUN-SUNG-1033, 4:38-6:36; FIGS. 4-18. For example, the treatment tip may be a solid stainless steel tube with a diamond coated end. *Id.*, 4:66-5:4. Treatment tip/tube/wand 22 includes an integrated abrasive end, and the entire “tool can be steam or chemical sterilized between uses.” *Id.*, 4:66-5:4; *see, e.g., id.*, FIGS. 4-5, 10-13.

Alternatively, the treatment tip “could be a stainless steel, plastic, or other

stiff tubular material, with a suitable removable and replaceable tip.” EUNSUNG-1033, 5:8-12. For example, Waldron’s Figure 8, reproduced below with Figure 12, depicts “a removable disk 46 sized to fit over the end of the tube 22.” *Id.*, 5:13-14. “The disk has an abrasive end or abrasive material attached to the outer end.” *Id.*, 5:14-15. And Waldron explains that “[d]uring the procedure[,] various disc with different abrasive characteristics can be interchanged and at the conclusion of the procedure the disc(s) 46 can be discarded.” *Id.*, 5:15-18. A POSITA would have recognized Waldron’s treatment tip/tube/wand 22 as the portion of Waldron’s device that is held by an operator (i.e., the claimed “handpiece”) while pressing the removable abrasive tip (i.e., the claimed “tip”) against the skin during a microdermabrasion treatment. EUNSUNG-1003, [64]; EUNSUNG-1033, 4:27-37.



Waldron, FIGS. 8 & 12

Waldron states that its “device uses a vacuum pump 24 which generates a

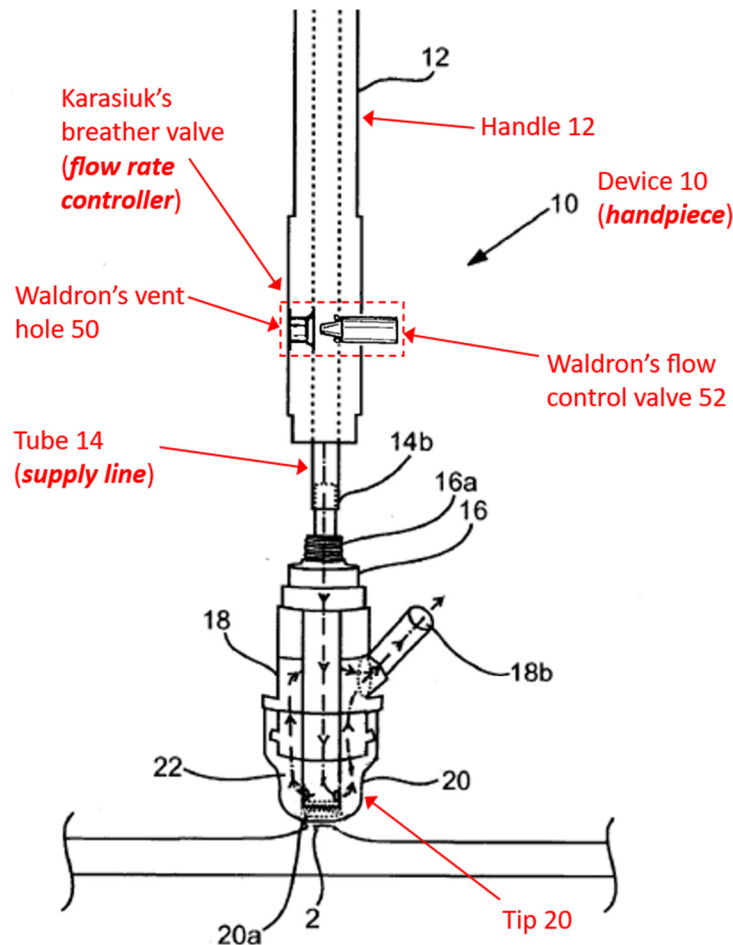
constant level of vacuum, which is controlled (lessened) by the venting of air into the system by the valve 16.” EUNSUNG-1033, 5:41-44. Waldron discloses an alternative arrangement, depicted above in Figure 12, in which “the level of vacuum can [] be decreased by air vented into the system through vent hole 50 by adjusting *flow control valve 52* mounted on the wand 22.” *Id.*, 5:44-50. Waldron further states that “valve 52 can be configured to be a simple on/off control or variable so that suction can be readily adjusted by the operator while performing the procedure.” *Id.*, 5:50-52.

2. Claims 2, 4, 20

Karasiuk-Palmer-Waldron renders obvious claims 2, 4, and 20 for the same reasons discussed regarding Karasiuk-Palmer. EUNSUNG-1003, [208]; *see* §§III.A.5-8, 10. Karasiuk-Palmer-Waldron further renders obvious claims 2, 4, and 20 based on Waldron’s teachings in two ways. EUNSUNG-1003, [209]-[230].

First, a POSITA would have found it obvious to substitute Karasiuk’s adjustable valve 78, breather line 76, and T-joint 76’ with Waldron’s handpiece-mounted flow control valve 52 and vent hole 50. EUNSUNG-1003, [210]-[215]. Specifically, a POSITA would have found it obvious to implement Karasiuk’s breather valve in the form of Waldron’s handpiece-mounted flow control valve 52 and vent hole 50 on Karasiuk-Palmer’s supply line (e.g., Karasiuk’s tube 14) as it

travels through handle 12 of Karasiuk's device 10. *Id.* An example of this implementation of Karasiuk's breather valve is depicted below in Modified Karasiuk FIG. 1A.



Karasiuk, Modified FIG. 1

As discussed above in §III.A.6, a POSITA would have been motivated and found it obvious to include a flow rate controller on a handpiece, and Waldron's handpiece-mounted flow rate controller (i.e., flow control valve 52 and vent hole 50) was one such method known in the art. EUNSUNG-1003, [210]. A POSITA

would have had a reasonable expectation of success in replacing Karasiuk's adjustable valve 78, breather line 76, and T-Joint 76' with Waldron's handpiece-mounted flow control valve 52 and vent hole 50 given that Karasiuk teaches a breather valve component "for varying an amount of air that is allowed into the tube 14" and Waldron's handpiece-mounted flow control valve 52 and vent hole 50 was a similar breather valve component known in the art. *Id.*, [212]; EUNSUNG-1004, [0059]; EUNSUNG-1033, 5:41-52.

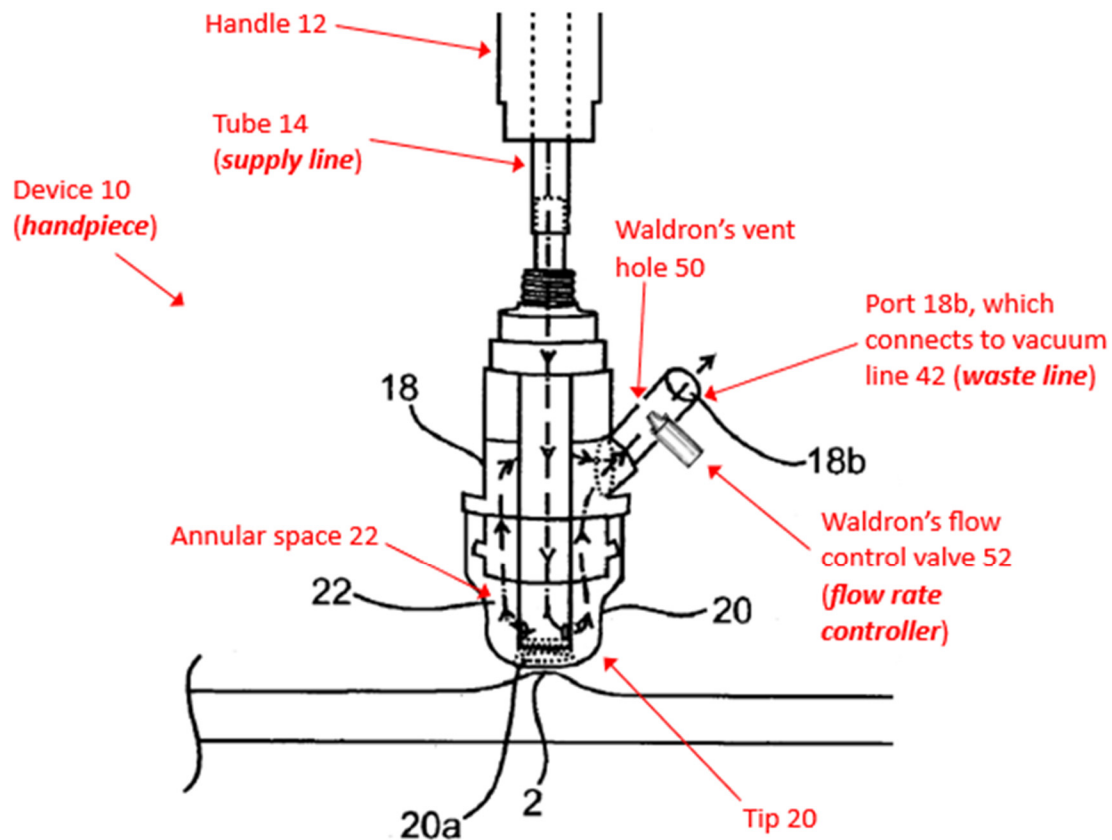
A POSITA would have understood that replacing Karasiuk's breather line 76, T-joint 76', and adjustable valve 78 with Waldron's handpiece-mounted flow control valve 52 and vent hole 50 would have been the simple substitution of one known element (e.g., Waldron's valve and vent hole) for another (e.g., Karasiuk's valve and breather line) to achieve predictable results—i.e., a handpiece-mounted breather valve for adjusting the level of suction applied to the treatment containers and thus the flow rate of a treatment material delivered to a handpiece. EUNSUNG-1003, [213]. This combination similarly reflects the use of a known technique to improve similar devices in the same way. *Id.* Moreover, the combination is merely an application of a known technique to a device ready for improvement. *Id.*

Second, a POSITA would have found it obvious to include Waldron's handpiece-mounted flow control valve 52 and vent hole 50 on the return/waste side of

Karasiuk's device 10 (e.g., at port 18b). EUNSUNG-1003, [216]-[230]. By placing Waldron's valve 52 and vent hole 50 on the return/waste side of Karasiuk's device 10, an operator would be able to control the level of suction at the treatment tip and thus the level of suction applied to the treatment area. *Id.*, [216]-[220].

A POSITA would have appreciated that it is desirable to control the level of suction applied to a treatment area while performing a microdermabrasion procedure. *Id.*, [218] (citing EUNSUNG-1031; EUNSUNG-1013; EUNSUNG-1029). Indeed, Karasiuk itself recognizes that having a range of suction levels is advantageous. EUNSUNG-1004, [0058] (“[A] vacuum in the range of about 2 to 14 psi is generally used during a procedure, depending upon the skin condition of the person being treated.”). But Karasiuk does not explicitly disclose a mechanism to vary the level of suction in the system before reaching the treatment tip. EUNSUNG-1003, [218].

A POSITA would have been motivated and found it obvious to modify Karasiuk's device 10 to include Waldron's handpiece-mounted flow control valve 52 and vent hole 50 at a point before reaching Karasiuk's treatment tip 20 (e.g., port 18b) so that Waldron's flow control valve 52 may adjust the level of suction in the treatment tip and thus the level of suction applied to the skin surface to be treated. EUNSUNG-1003, [219]. An example of this Karasiuk-Palmer-Waldron combination is illustrated below in Modified Karasiuk FIG. 1A.



Karasiuk, Modified FIG. 1

A POSITA would have had a reasonable expectation of success in combining Waldron's handpiece-mounted flow control valve 52 and vent hole 50 with the Karasiuk-Palmer system given that Waldron also discloses a vacuum-powered microdermabrasion device and operates in a similar manner to the Karasiuk-Palmer system. EUNSUNG-1003, [224]. Ramey further evidences the use a similar flow rate controller in a microdermabrasion system. *Id.*; EUNSUNG-1028, 14:10-24.

Combining Waldron's handpiece-mounted flow control valve 52 with Karasiuk's device 10 in the manner described above reflects the use of a known

method—i.e., Waldron’s handpiece-mounted flow control valve 52 and vent hole 50—to obtain predictable results—i.e., a handpiece-mounted flow rate controller for varying the level of suction in a waste line and thus the level of suction applied by the handpiece to a treatment area. EUNSUNG-1003, [225]. The combination would also reflect the use of a known technique to improve similar devices in the same way. *Id.*, [226]. The combination is also merely the application of a known technique to a known device ready for improvement. *Id.*, [227].

In the Karasiuk-Palmer-Waldron combination described above, a POSITA would have understood Waldron’s flow control valve 52 and vent hole 50 as the claimed flow rate controller. EUNSUNG-1003, [229]. As Mr. Simon explains, “because Waldron’s flow control valve 52 would adjust not only the level of suction applied to the treatment area but would also adjust the level of suction at all components connected upstream from flow control valve 52 and vent hole 50,” adjusting Waldron’s valve 52 would vary the amount of suction applied to the selected container and thus the flow rate of the treatment material from that container to Karasiuk’s device 10. *Id.*

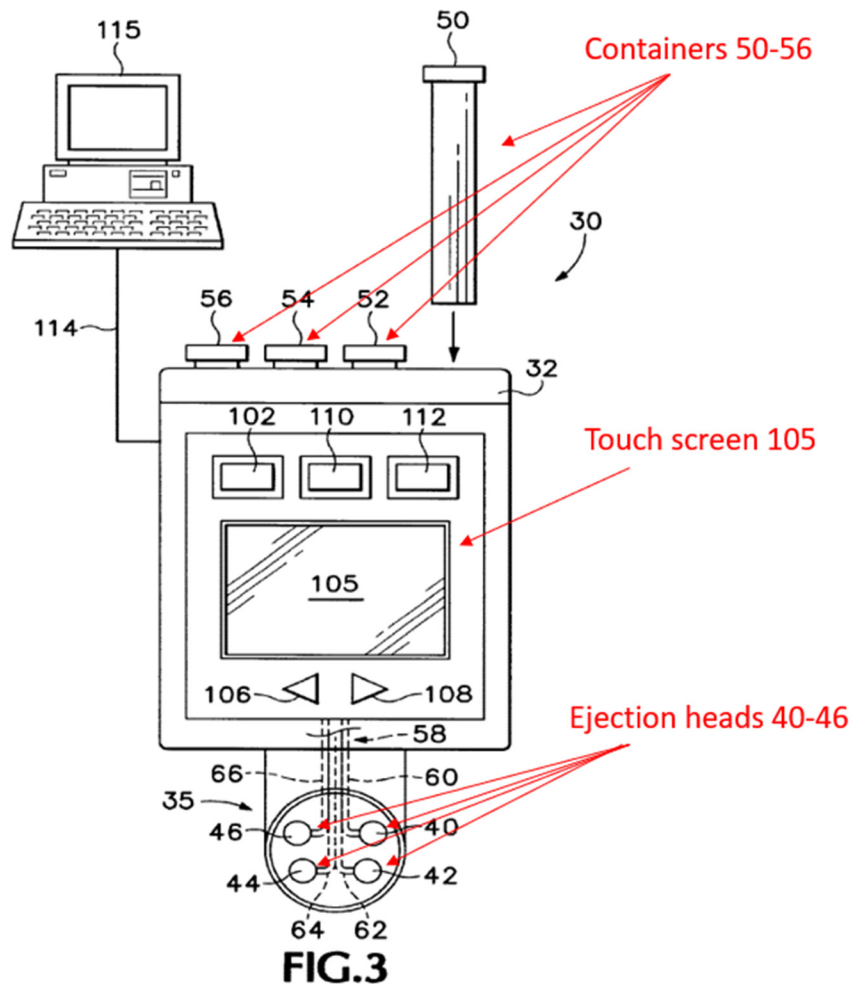
Thus, the combination of Karasiuk, Palmer, and Waldron additionally renders obvious claims 2, 4, and 20.

C. [GROUND 1C]: Karasiuk-Palmer-Trueba

1. Trueba

Similar to Karasiuk and Palmer, Trueba discloses a fluid delivery system including multiple containers 50-56 and pump means (e.g., ejection heads 40-46).

EUNSUNG-1008, Abstract, 8:49-11:3, FIG. 3. EUNSUNG-1003, [67]-[71].



Trueba, FIG. 3

Trueba's fluid delivery is controlled by a computer (e.g., controller 100)

linked to a user input (e.g., external computer 115 or touch screen 105). EUNSUNG-1003, [68]. For example, “[c]ontroller 100 operates to apply firing signals to the ejection heads 40-46, which respond by ejecting fluid from reservoirs 50-56.” EUNSUNG-1008, 10:60-62. Touch screen 105 includes “a series of images that, when touched with a finger or stylus, program the controller 100” and select a particular drug or dosage. EUNSUNG-1008, 11:42-12:8, FIG. 3.

Using this computer control, multiple compositions can be automatically dispensed simultaneously or sequentially. EUNSUNG-1008, 3:4-8, 5:18-6:9, 6:10-16, 11:4-34; EUNSUNG-1003, [69]-[70]. Trueba’s device can be programmed to respond to changing clinical circumstances. EUNSUNG-1008, 11:15-20; EUNSUNG-1003, [71]. Further, the device can be programmed to “prevent unauthorized alteration of dosages” and “permit certain ranges of dosages to be administered.” EUNSUNG-1008, 12:2-9; EUNSUNG-1003, [71].

2. Karasiuk-Palmer-Trueba Combination

In the Karasiuk-Palmer-Trueba combination (“Karasiuk-Palmer-Trueba”), Karasiuk-Palmer’s system would have been modified based on Trueba’s teachings of computer control and display. EUNSUNG-1003, [231]-[246]. For example, in the resulting system, Karasiuk-Palmer’s selector means (e.g., Palmer’s selector valve 20) would be controlled by a computer (e.g., Trueba’s controller 100), which is controlled by a user input (e.g., Trueba’s touch screen 105), to control the flow

of treatment solutions from containers (e.g., Palmer's reservoirs 12₁-12₆), so that a user can use the user input device to select a flow of fluids from the containers.

EUNSUNG-1003, [246]. The combined device also includes a display (e.g., Trueba's touch screen 105) that indicates which solution is being delivered. *Id.*

A POSITA would have been motivated to modify Karasiuk-Palmer's system by including Trueba's computer control and display for several benefits, such as added precision, automation, and clarity. EUNSUNG-1003, [232]-[246].

First, in the combination, Trueba would allow programming delivery of different treatment materials at different times and thus allow automated delivery following complex administration protocols. EUNSUNG-1008, 3:34-38, 4:65-5:17, 6:1-9, 6:27-7:9, 10:52-11:49, FIG. 1; EUNSUNG-1003, [233].

Second, Trueba's techniques offer additional benefits in that "[c]omputerized control of medication dosing, which may be programmed by medical personnel for subsequent automated delivery, can help avoid toxic drug interactions, overdoses, and death." EUNSUNG-1008, 6:1-9, 12:2-5; EUNSUNG-1003, [234].

Third, the combination would benefit from Trueba's touch screen that shows "a series of images that, when touched with a finger or stylus, program the controller 100" and that "indicate[s] which selections have been made" and displays "information such as desired dosages, frequency, and potential side effects." EUNSUNG-1008, 11:42-12:8, FIG. 3; EUNSUNG-1003, [235] (citing EUNSUNG-

1014).

A POSITA would have had a reasonable expectation of success in implementing the combination given the technical similarities between Karasiuk, Palmer, and Trueba. EUNSUNG-1003, [237]. Trueba's system is similar to Karasiuk's, including treatments "for topical application of a bioactive composition to the surface of the subject, such as a patch of skin." EUNSUNG-1008, 3:22-27; EUNSUNG-1003, [238]. Trueba also discloses a system similar to Palmer's by selecting from different treatment materials from different containers. EUNSUNG-1008, 3:4-8, 5:14-26, 11:4-34, FIG. 3; EUNSUNG-1003, [238].

Further, Karasiuk-Palmer-Trueba would merely constitute the use of a known technique to improve similar devices in the same way. EUNSUNG-1003, [243]. Indeed, by the Critical Date, computer (e.g., PLC) controlled fluid delivery systems were well-known. EUNSUNG-1003, [242]-[245]; EUNSUNG-1007, FIG. 3; EUNSUNG-1008, 11:4-34, FIG. 3; EUNSUNG-1015, Abstract. The modification requires nothing more than automating the manual process in Karasiuk-Palmer with well-known automation techniques. EUNSUNG-1003, [243]-[245] (discussing EUNSUNG-1010, EUNSUNG-1006, EUNSUNG-1011, EUNSUNG-1020).

3. Claims 1-5, 7, 9

Karasiuk-Palmer-Trueba renders obvious claims 1-5, 7, and 9 for the same reasons as discussed regarding Karasiuk-Palmer. EUNSUNG-1003, [274]; *see*

§III.A.

Karasiuk-Palmer-Trueba further renders obvious [1.3] based on Trueba's teachings. EUNSUNG-1003, [248]-[254]. To the extent that the term "sequentially" is interpreted to require automatic switching between first and second treatment materials, Karasiuk-Palmer-Trueba renders this limitation obvious. *Id.*; EUNSUNG-1008, 3:4-8, 5:18-6:9, 6:10-16, 11:4-34, 12:2-9. As discussed in §III.C.2, Karasiuk-Palmer-Trueba's system employs "[c]omputerized control of medication dosing, which may be programmed by medical personnel **for subsequent automated delivery**," as taught by Trueba. EUNSUNG-1008, 6:6-9; EUNSUNG-1003, [249]-[253]. A POSITA would have found it obvious to employ Trueba's automation in the system of Karasiuk-Palmer to provide added precision (avoiding human error), automation, and clarity, resulting in automatic switching and delivery of treatment fluids in a sequential manner. EUNSUNG-1003, [253]; *In re Vener*, 262 F.2d 91, 95 (CCPA 1958) (broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art). Similarly, dependent claims 2-10 that inherit the same subject matter are rendered obvious by Karasiuk-Palmer-Trueba. EUNSUNG-1003, [254].

4. Claims 2, 7

[2.2] [7] . . . a user input device to select the first treatment material or the second treatment material for delivery to the handpiece.

The Karasiuk-Palmer-Trueba combination renders obvious claims 2 and 7 for the same reasons discussed regarding Karasiuk-Palmer. EUNSUNG-1003, [260]. Karasiuk-Palmer-Trueba further renders obvious limitations [2.2] and [7] based on Trueba's teachings. EUNSUNG-1003, [260]-[261]. To the extent Patent Owner argues that Palmer's selector knob 78 is not the claimed user input device, Karasiuk-Palmer-Trueba includes ***a user input device*** (e.g., Trueba's touch screen 105) to select the first treatment material or the second treatment material for delivery to the handpiece. §III.C.2; EUNSUNG-1003, [261]; EUNSUNG-1008, 11:40-12:8, FIG. 3.

5. Claim 6

[6] The system of claim 1, further comprising a computing device configured to control at least one function of the system.

As discussed in §III.C.2, Karasiuk-Palmer-Trueba includes ***a computing device*** (e.g., Trueba controller 100) configured to control at least one function of the system (e.g., delivery of fluids). EUNSUNG-1003, [259]; EUNSUNG-1008, 3:34-38, 4:65-5:17, 6:1-9, 6:27-7:9, 10:52-11:49, 12:2-5, FIG. 1.

6. Claim 8

[8] The system of claim 7, wherein the user input device comprises a touch screen.

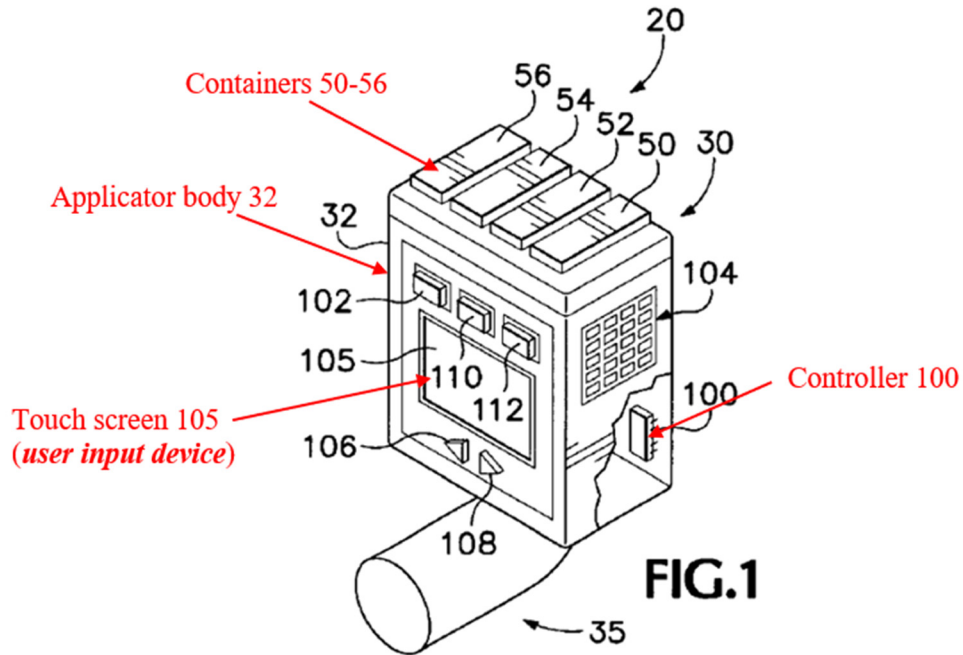
As discussed in §III.C.2, Karasiuk-Palmer-Trueba's user input device includes ***a touch screen*** (e.g., Trueba's touch screen 105). EUNSUNG-1003, [262]; EUNSUNG-1008, 11:40-12:8, FIG. 3.

7. Claim 9

[9] The system of claim 7, wherein the user input device is positioned on the console.

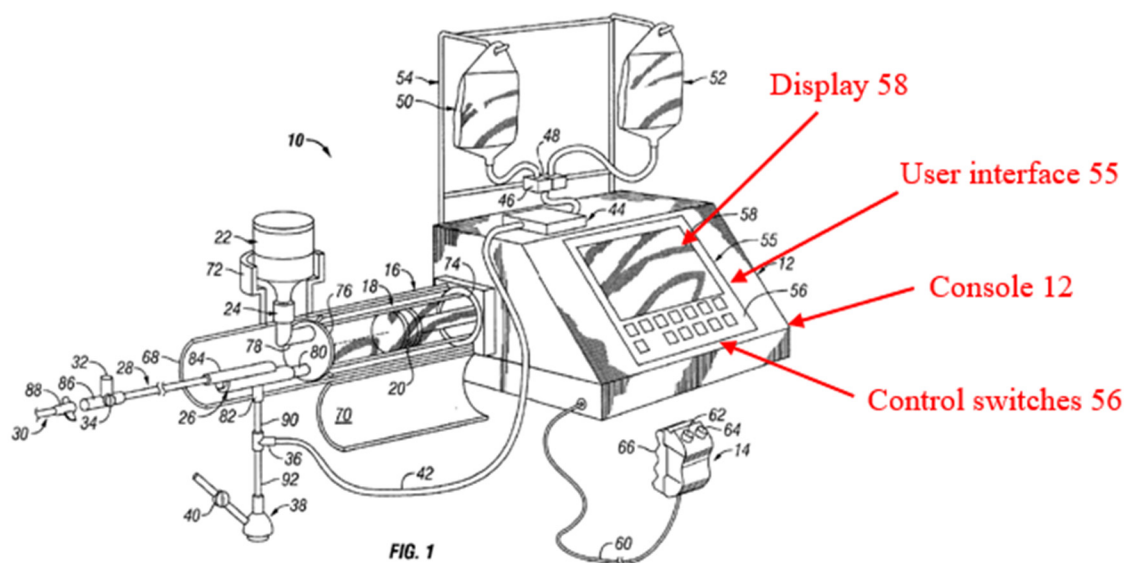
The Karasiuk-Palmer-Trueba combination renders obvious positioning a user input device (e.g., Trueba's touch screen 105) on a console (e.g., Palmer's mobile cart 170). EUNSUNG-1003, [263]-[273].

Trueba's exemplary embodiment is a handheld pulmonary inhaler, in which containers 50-56, ejection heads 40-46, controller 100, and touch screen 105 are contained within body 32 of applicator 30. EUNSUNG-1008, 10:52-12:8; FIG. 1. A POSITA would have recognized that for applications using a larger volume of treatment material, it would be advantageous to place Trueba's containers 50-56, ejection heads 40-46, controller 100, and touch screen 105 in a console. EUNSUNG-1003, [265]-[267].



Trueba, FIG. 1

In the Karasiuk-Palmer-Trueba combination, a POSITA would have found it obvious to position Trueba's touch screen 105 (*user input device*) on Palmer's mobile cart 170 (*console*) (e.g., on control unit enclosure 35) for several reasons. EUNSUNG-1003, [267]-[272]. **First**, placing a user input device like Trueba's touch screen 105 on a console was well-known and would have been within a POSITA's general knowledge. EUNSUNG-1003, [268]. For example, Duchon discloses a system for injecting radiographic contrast material into a blood stream that includes a console 12 with a user interface 55 (e.g., control switches 56 and display 58) for controlling the system (e.g., the flow rate of the injection). EUNSUNG-1010, [0063], [0111]; FIG. 1.



Duchon, FIG. 1

Positioning Trueba's touch screen 105 on Palmer's mobile cart 170 thus reflects a use of a known method to obtain predictable results. EUNSUNG-1003, [268]. This arrangement would also reflect a use of a known technique to improve similar devices in the same way. *Id.* Moreover, this arrangement is merely an application of a known technique to a known device ready for improvement. *Id.*

Second, a POSITA would have been motivated to position interconnected devices with each other to reduce manufacturing complexity and cost. EUNSUNG-1003, [270]. As discussed in §III.C.2, Trueba’s touch screen 105 interfaces with controller 100 to control the operation of Palmer’s selector valve means 20, which is located on Palmer’s mobile cart 170 in control unit enclosure 35. A POSITA would have found it obvious to position those devices in the same location, i.e., on

Palmer's mobile cart 170. *Id.*

Third, placing Trueba's touch screen 105 on Palmer's mobile cart 170 would have been obvious to try. EUNSUNG-1003, [271]. A POSITA would have recognized a finite number of identified, predictable locations to locate Trueba's touch screen 105 in the Karasiuk-Trueba-Palmer system: either on Karasiuk's device 10 or on Palmer's mobile cart 170 (e.g., on control unit enclosure 35). *Id.* A POSITA would have had "good reason to pursue the known options," and thus, locating Trueba's touch screen 105 on Palmer's mobile cart 170 would have been obvious to try. *KSR*, 550 U.S. at 421.

Fourth, placing Trueba's touch screen 105 on Palmer's mobile cart 170 would have been an obvious design choice because it is merely the rearrangement of parts without any "difference in function" or "unexpected results." EUNSUNG-1003, [272].⁹

8. Claim 10

[10] The system of claim 1, wherein the console comprises a display.

Karasiuk-Palmer-Trueba's system includes **a display** (e.g., Trueba's touch screen 105) indicating which solution is being delivered. *See* §III.C.2. As discussed in [9], a POSITA would have found it obvious to place a display (e.g., Trueba's

⁹ *See* cases cited *supra* note 6.

touch screen 105) on Palmer's mobile cart 170 (*console*). EUNSUNG-1003, [274]; *see* §III.C.7.

9. Claims 11-19

Claim 11 claims similar subject matter recited in claims 1 and 6. EUNSUNG-1003, [275].¹⁰ Claims 12-19 claim similar subject matter recited in claims 2-5 and 7-10. EUNSUNG-1003, [287], [292]-[298]. The combination of Karasiuk, Palmer, and Trueba renders these claim features obvious for similar reasons to those discussed above with respect to claims 1-10. EUNSUNG-1003, [275]-[298].

10. Claim 20

Claim 20 claims similar subject matter recited in claim 1 and claim 2, which in turn claims similar subject matter recited in claims 3-5 and 7. EUNSUNG-1003, [299]. The combination of Karasiuk, Palmer, and Trueba renders these claim fea-

¹⁰ Claim 11 recites a tip that is “placed” instead of “pressed” against the skin and substitutes “extending between” for “connected between” when describing the supply and waste lines. A POSITA would not appreciate any difference between “connected between” and “extending between” as it relates to the patentability of the ’607 claims over the grounds presented in this petition. EUNSUNG-1003, [278]-[283].

tures obvious for similar reasons discussed with respect to claims 1 and 2. EUNSUNG-1003, [300]-[309].

D. [GROUND 1D]: Karasiuk-Palmer-Trueba-Waldron

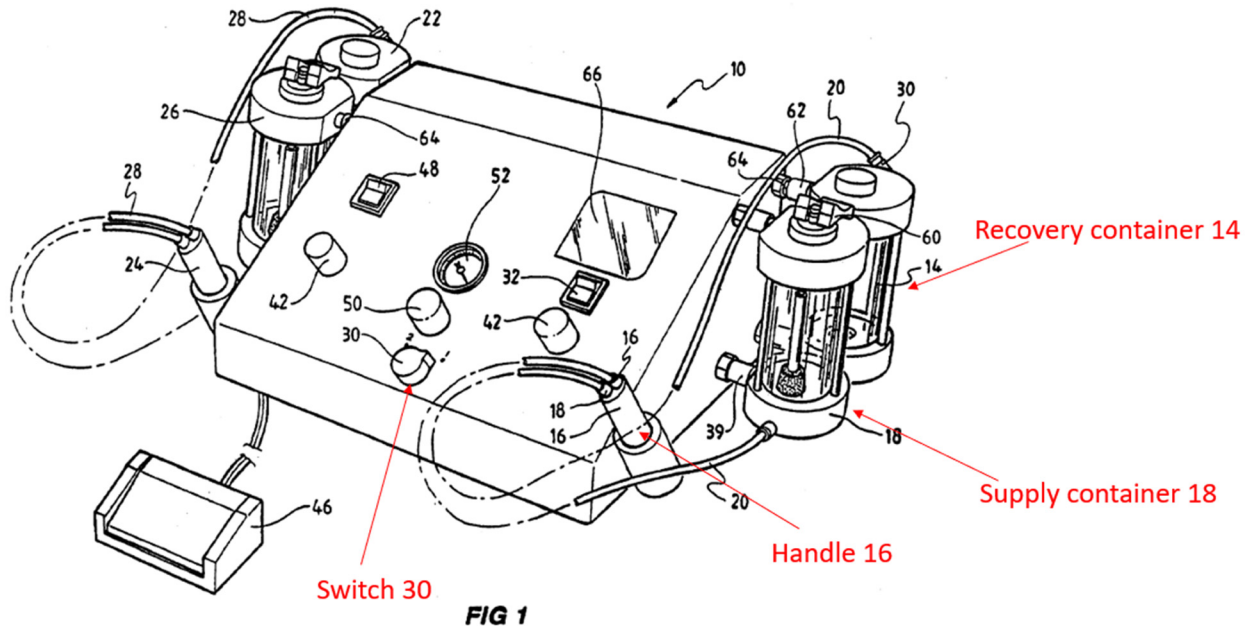
1. Claims 2, 4, 12, 14, 20

Karasiuk-Palmer-Trueba-Waldron renders obvious claims 2, 4, 12, 14, and 20 for the same reasons discussed regarding Karasiuk-Palmer-Trueba. EUNSUNG-1003, [310]; *see* §III.A.C. Karasiuk-Palmer-Trueba-Waldron further renders obvious claims 2, 4, 12, 14, and 20 based on Waldron's teachings for similar reasons as those explained above in §III.B.2. EUNSUNG-1003, [310].

E. [GROUND 2A]: Greenberg

1. Greenberg

Greenberg describes a system for conducting microdermabrasion procedures using a handpiece (e.g., hand tool 16) to apply treatment materials to a targeted area of skin. EUNSUNG-1006, Abstract, [0049]-[0064], FIG. 1; EUNSUNG-1003, [72]-[77].

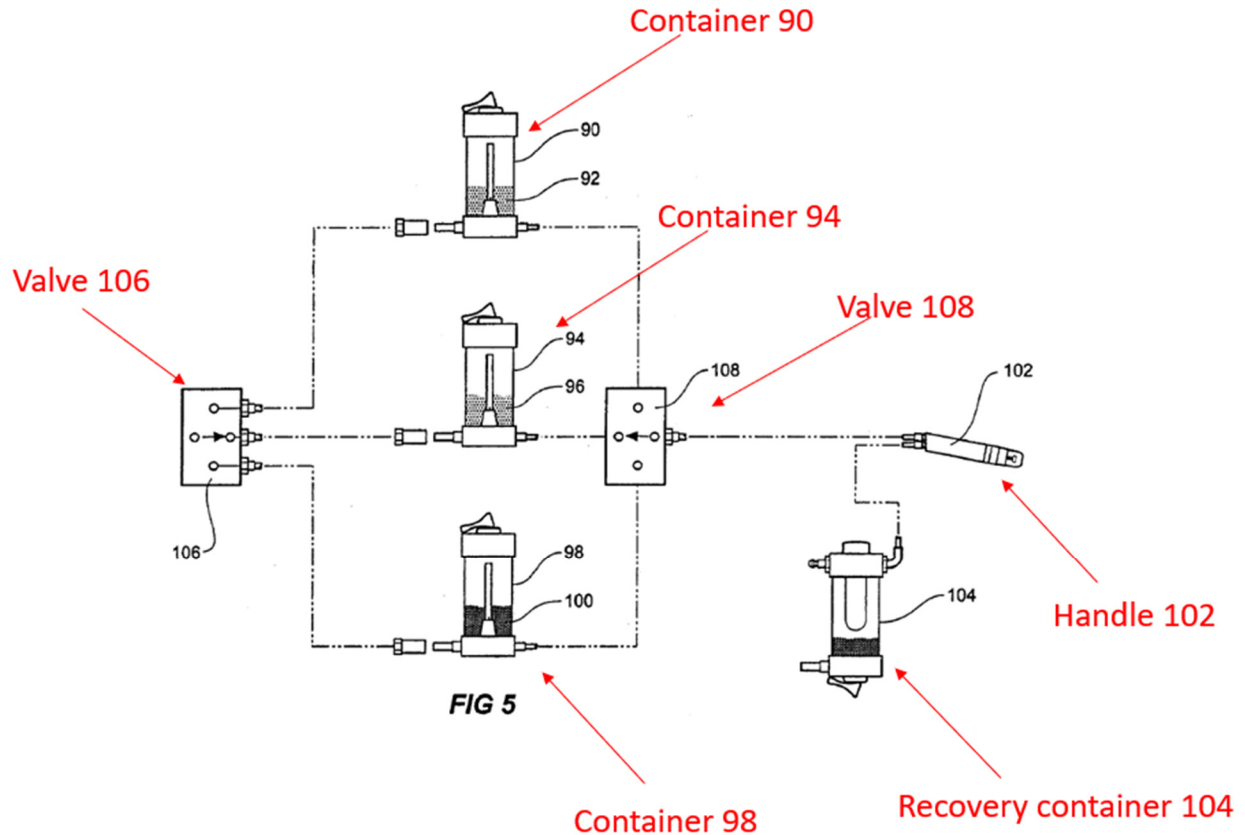


Greenberg, FIG. 1

Greenberg's system includes: (1) "a pneumatic source operatively connected to a recovery container and to a hand tool"; (2) "a plurality of supply containers including particulates"; and (3) "a valve selectively connecting said pneumatic source, recovery container and hand tool to a selected one of said supply containers." EUNSUNG-1006, [0013]-[0016]; EUNSUNG-1003, [73]. In operation, the pneumatic source, such as a "vacuum pump," "provides for an air flow through the recovery container, hand tool and the selected supply container in communication with same, drawing said particles from the supply container through the hand tool and into the recovery container, said hand tool positioned on a surface to be treated and including an aperture so located that particles passing through said hand tool are caused to impinge on the surface thereby treating it." EUNSUNG-1006,

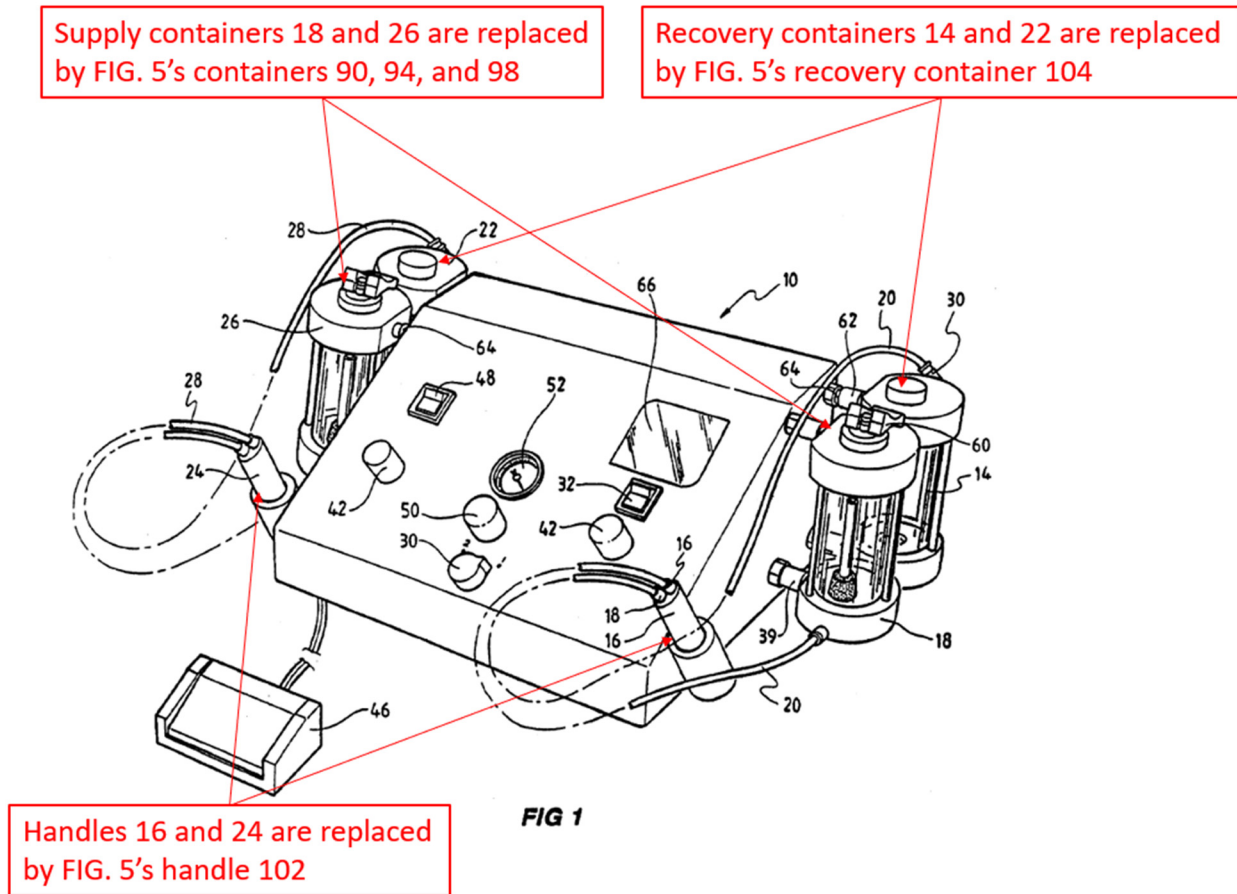
[0017], [0026], [0004], [0049]-[0059], [0066], FIG. 3; EUNSUNG-1003, [73].

Greenberg's system allows "a choice of different particles to use in a micro-dermabrasion machine," "with a plurality of supply containers housing different particles." EUNSUNG-1006, [0073]-[0077]; EUNSUNG-1003, [74]. In FIG. 5, Greenberg's device includes three supply containers (e.g., containers 90, 94, and 98), and valves 106 and 108 control which container is connected to handpiece 102 and recovery container 104. EUNSUNG-1006, [0077]; EUNSUNG-1003, [74]. In operation, "[a] supply container can be chosen to be in communication with handle 102 and recovery container 104 by the use of valve 106 that controls air flow into the respective supply container and valve 108 that th[e]n connects that supply container to the handle 102 and recovery container 104." EUNSUNG-1006, [0077].



Greenberg, FIG. 5

As recognized in Greenberg and also noted by Mr. Simon, FIG. 5's implementation would have been readily incorporated into FIG. 1's apparatus. EUNSUNG-1003, [75]; EUNSUNG-1006, [0077] ("This can be achieved in **the present apparatus** by having an apparatus with a plurality of supply containers"). For example, as shown in FIG. 1, (1) FIG. 5's containers 90, 94, 98 and valves 106, 108 would be used instead of FIG. 1's supply containers 18 and 26; (2) FIG. 5's recovery container 104 would be used for FIG. 1's recovery containers 14 and 22, and (3) FIG. 5's single handle 102 would replace FIG. 1's two handles 16 and 24. EUNSUNG-1003, [75].



Greenberg, FIG. 1

Further, to connect multiple containers 90, 94, 98 with single handle 102, FIG. 5's control valves (e.g., valves 106 and 108) are used to enable selective fluid communication with each of the containers. EUNSUNG-1003, [75]. As Mr. Simon describes, other structures described with respect to FIGS. 1-4 would have been similarly applicable for the FIG. 5 implementation. *Id.* Further, each of FIG. 5's containers 90, 94, 98, 104 would have been connected to FIG. 1's apparatus 10 in the same manner as FIG. 1's containers 14, 18, 22, 26. EUNSUNG-1006, [0053],

[0062], FIG. 1; EUNSUNG-1003, [75]. The same mechanism and operation described for FIG. 1 would have been used for FIG. 5's implementation. EUNSUNG-1003, [75].

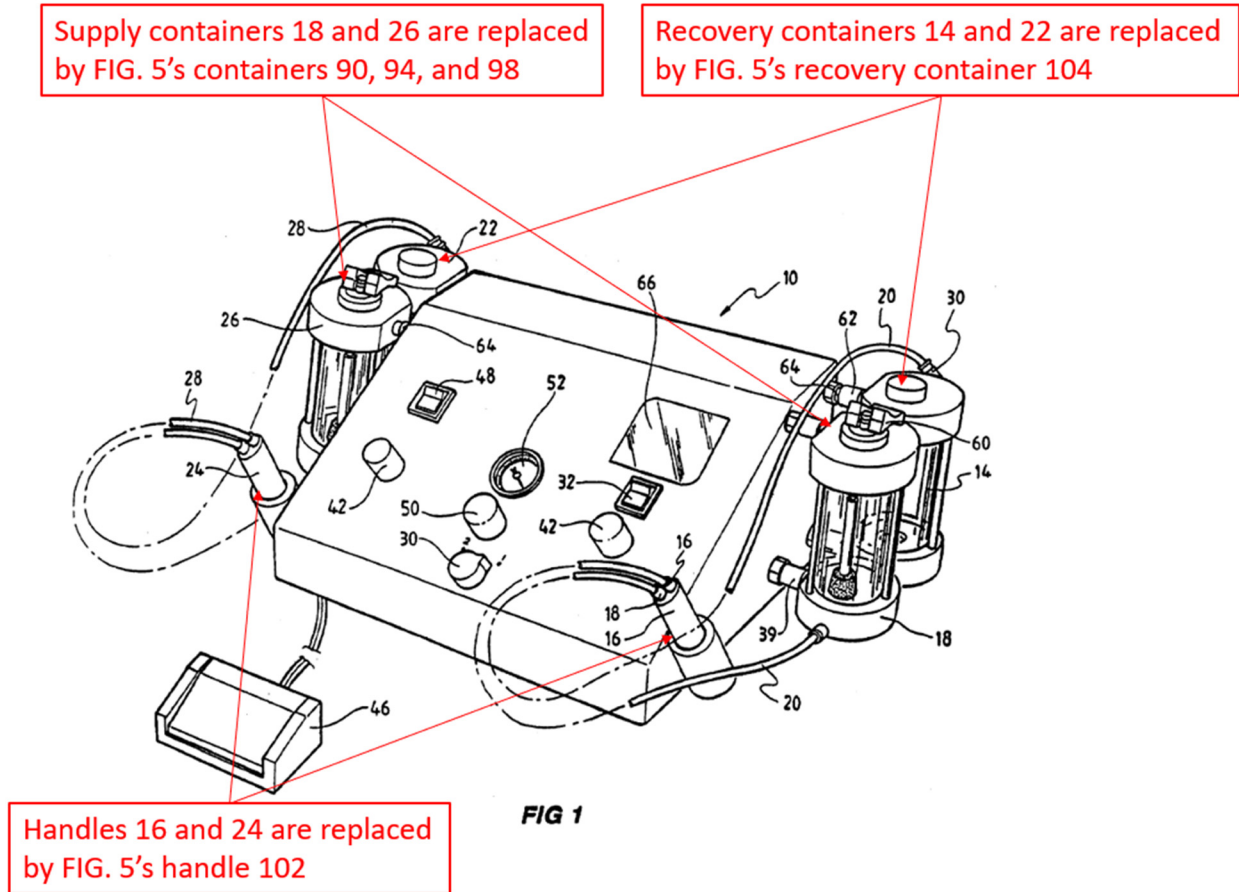
2. Claim 1

[1.pre] A skin treatment system, comprising:

To the extent the preamble is limiting, Greenberg describes “[a] *microabrasion apparatus for providing treatment of skin or other surfaces.*” EUNSUNG-1006, Abstract, FIGS. 1, 3; EUNSUNG-1003, [311].

[1.1] a console configured to receive a first container containing a first treatment material and a second container containing a second treatment material;

Greenberg describes the *console* by its “apparatus 10.” EUNSUNG-1003, [312]-[322]. As shown in FIG. 1, Greenberg’s apparatus 10 is designed to receive and connect the containers and handles, and enclose components within the apparatus, allowing the user to control fluid flow via switches (e.g., switch 30). EUNSUNG-1006, [0049]-[0064]; *supra* §III.E.1; EUNSUNG-1003, [313]. Thus, a POSITA would have recognized and found obvious that Greenberg’s apparatus corresponds to a *console* that receives multiple containers. EUNSUNG-1003, [313]. This aligns with the ’607 patent’s disclosure of a console that receives/connects multiple containers, a valve, a handpiece, a vacuum pump, and other various components. *Id.*



Greenberg, FIG. 1

To the extent Patent Owner argues that Greenberg's apparatus does not include a console, a POSITA would have been motivated and found it obvious to place components of Greenberg's apparatus in a console for increased portability and/or organization. EUNSUNG-1003, [314]. As Mr. Simon explains, using a console to house similar medical devices was well-known and would have been within a POSITA's general knowledge. EUNSUNG-1003, [314]-[318] (discussing EUNSUNG-1010, EUNSUNG-1005, EUNSUNG-1011, EUNSUNG-1020). Indeed, a POSITA would have viewed a console as one of a finite number of options to

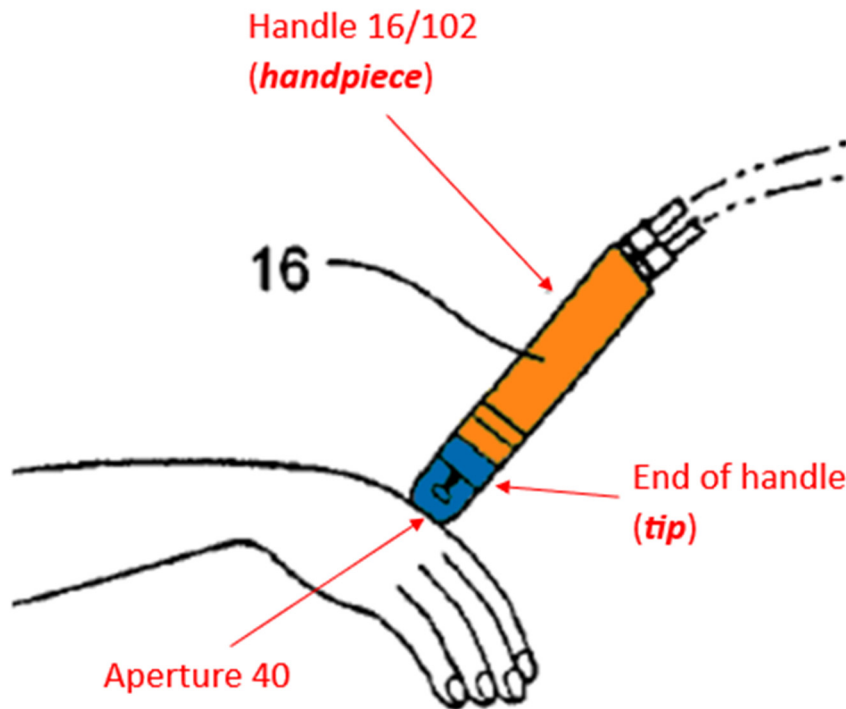
achieve increased portability and/or organization that would have been obvious to try. *Id.* A POSITA would have had a reasonable expectation of success to place Greenberg's apparatus in a console, as it would constitute the use of a known technique to improve similar devices in the same way. *Id.*

As discussed in §III.E.1, Greenberg describes at least three supply containers in the apparatus, two of which would have been understood as a ***first container*** (e.g., container 90) and a ***second container*** (e.g., container 94), received at the console. EUNSUNG-1003, [319]; EUNSUNG-1006, [0077], FIG. 1.

Further, as shown in FIG. 5, Greenberg's three supply containers that contain "different particles each of which performs different types of treatment such as abrasion." EUNSUNG-1006, Abstract, [0077]; EUNSUNG-1003, [320] (discussing EUNSUNG-1006, [0023], [0082], [0072]-[0077], [0087], [0011]-[0012]). In Greenberg, at least three different treatment materials, including (1) purely organic materials, (b) a mixture of abrasive particles such as aluminum oxide mixed with organic materials, and (c) abrasive particles that are coated with organic materials are contained in respective containers. EUNSUNG-1006, [0072]-[0077]; EUNSUNG-1003, [320]-[321]. Two of these different treatment materials would have been understood as a ***first treatment material*** and a ***second treatment material***. EUNSUNG-1003, [321].

[1.2] a handpiece configured to couple to a tip that can be pressed against skin to perform skin treatment;

Greenberg describes a handpiece (e.g., “handle 16” (FIG. 1) and “handle 102” (FIG. 5)) that includes a tip, the end of handle 102 with aperture 40, which is pressed against skin to perform microdermabrasion. EUNSUNG-1006, [0049], [0052], [0077], FIG. 3; EUNSUNG-1003, [323]-[334]. A POSITA would have understood Greenberg’s handle 16/102 (depicted below in orange) and the end of the handle 102 with aperture 40 (depicted below in blue) as teaching the claimed *handpiece* and *tip*, respectively. EUNSUNG-1003, [326].



Greenberg, FIG. 3 (excerpt)

Greenberg does not describe the connection between the body of handle

16/102 and the end of the handle with aperture 40, but a POSITA would have understood Greenberg's tip as being permanently affixed (*coupled*) to handle 16/102. EUNSUNG-1003, [327]. This aligns with the '607 patent's disclosure, which states that "[t]he tip 34 can be permanently or temporarily coupled to the distal end 36 of main body 30." *Id.*; EUNSUNG-1001, 7:12-13.

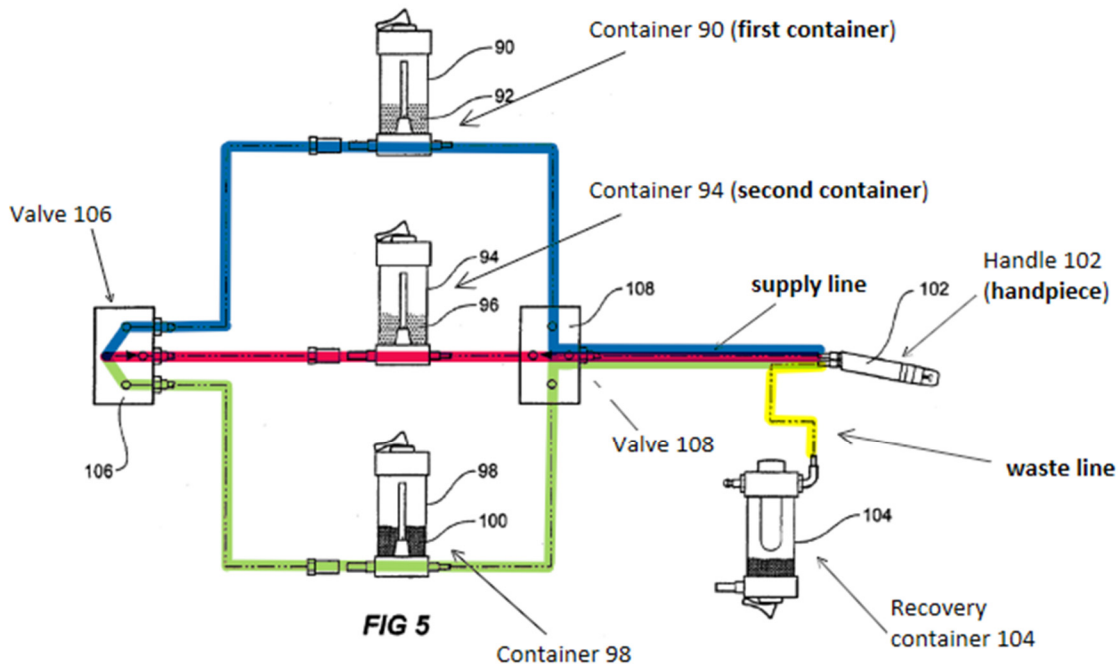
To the extent Patent Owner argues that "configured to couple to a tip" requires the claimed tip to be a separate, detachable member, it would have been obvious to a POSITA to modify the end of Greenberg's handle 16/102 to be removable. EUNSUNG-1003, [329]-[333]. A POSITA would have recognized that Greenberg's tip, which is placed against a patient's skin and comes into contact with abraded debris from the skin surface, would need to be either sterilized or replaced between patients. EUNSUNG-1003, [330] (citing EUNSUNG-1033, 5:2-18; EUNSUNG-1004, [0051]; EUNSUNG-1030).

Detachable tips were well known in the art. EUNSUNG-1003, [331]; (discussing EUNSUNG-1004, [0015], [0042], [0047], [0050], [0063], Claim 3, FIG. 1; EUNSUNG-1033, 4:66-5:40, FIGS. 8-9). A POSITA would have recognized a finite number of identified predictable solutions to maintain hygiene between patients (i.e., either sterilizing or replacing the treatment tip between patients), and it would have been obvious to try using a detachable tip that can be either removed and sterilized or disposed of and replaced between patients. EUNSUNG-1003,

[332]. Additionally, a POSITA would have been motivated to use a disposable tip so that a sterilizing device, such as an autoclave, is not required to prepare the handpiece for use between patients. *Id.*, [333]. Alternatively, a POSITA would have appreciated the benefit of sterilizing a reusable, detachable tip, as opposed to the entire handpiece, so that a smaller autoclave may be used and that a clean tip could be affixed to the handpiece while the used tip is being sterilized—thus minimizing downtime between uses. *Id.* A POSITA would have found it obvious to ***couple*** the detachable tip with the body of handle 16/102 using known methods such as a friction fit or threading. EUNSUNG-1003, [334]; *see, e.g.*, EUNSUNG-1004, [0047].

[1.3] a supply line connected between the handpiece and the console for sequentially delivering treatment material to the handpiece from the first container or the second container;

As discussed in §III.E.1, FIG. 5's implementation would have been readily incorporated into FIG. 1's apparatus. As shown in FIG. 5, Greenberg's system includes "valve 108" configured to selectively connect one of supply containers 90, 94, 98 to handle 102 depending on which container is selected via valve 106. EUNSUNG-1006, [0077]; EUNSUNG-1003, [336]. Therefore, Greenberg's valve 108 selectively receives treatment material from the respective supply containers 90, 94, 98 when these containers are respectively selected to receive air flow thereinto (e.g., blue, red, and green paths in annotated FIG. 5). *Id.*



Greenberg, FIG. 5

Greenberg’s valve system (including valve 108) is selectively in fluid communication with handle 102 (*handpiece*). EUNSUNG-1006, [0077], FIG. 5; EUNSUNG-1003, [336]. Although FIG. 5 does not label the path (dotted line) between valve 108 and handle 102, it would have been obvious that it is defined by a tube, such as tube 20 illustrated in FIG. 1, and this tube forms a “*supply line*” within the meaning of element [1.3]. EUNSUNG-1006, [0049], FIG. 1; EUNSUNG-1003, [337]. Moreover, as discussed in §III.E.1 and [1.1], the valve system and containers 90, 94, 98 are received in apparatus 10 (*console*). *Id.*, [338]. As Mr. Simon explains, “because the supply line connects to valve 108 and the containers stored in apparatus 10, a POSITA would have understood that Greenberg’s supply line is

‘*connected between*’ Greenberg’s handle 16/102 and apparatus 10” (*console*). *Id.*

Should Patent Owner argue that a supply line connected to a component located within or upon a console is not “connected between the handpiece and the console,” Petitioner submits that such an interpretation of limitation 1.3 is not supported by the ’607 patent’s disclosure. EUNSUNG-1003, [338]-[339].¹¹ Even if it was, it would have been obvious to connect Greenberg’s supply line to an intermediate component, such as a port or receiver, on Greenberg’s apparatus 10 before ultimately connecting to other components located within or upon the console. EUNSUNG-1003, [340].¹²

Additionally, Greenberg’s “apparatus contains separate abrasive and fragrant particles and that a user is firstly treated with the highly abrasive particles and **subsequently** with the organic ones that assist in leaving a residual layer on the skin.” EUNSUNG-1006, [0084], [0089], [0072]-[0077]; EUNSUNG-1003, [341]. Thus, Greenberg discloses or renders it obvious that the supply line is used for delivering the first treatment fluid (e.g., “highly abrasive particles”) in the first container (e.g., container 90) and the second treatment fluid (e.g., “organic ones”) in the second

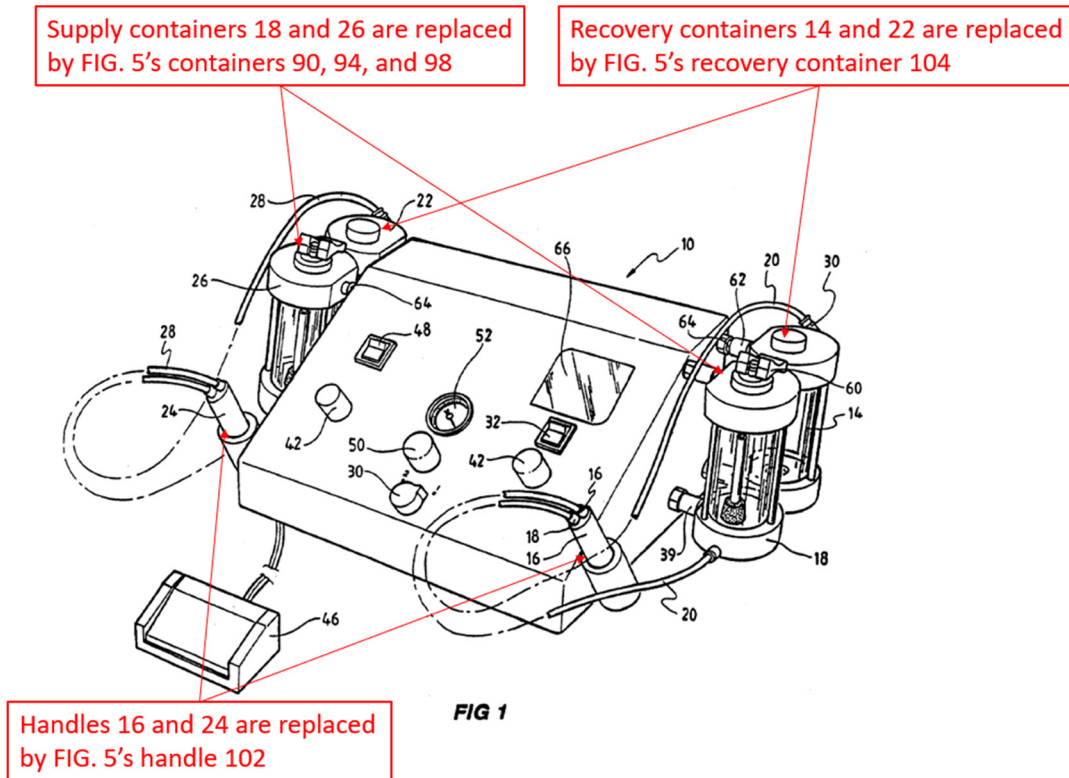
¹¹ See *supra* note 2.

¹² See *supra* note 3.

container (e.g., container 94) to the handpiece sequentially (“subsequently”). EUNSUNG-1003, [342].

[1.4] a waste line connected between the handpiece and the console; and

As explained in further detail below in [1.5], Greenberg describes handle 102 as being in communication with recovery container 104 (i.e., a waste container) through ***a waste line*** (e.g., tube 28). EUNSUNG-1003, [343]-[348]; EUNSUNG-1006, [0077]; *see id.* FIG. 5. As explained in [1.1], Greenberg’s recovery container is stored in apparatus 10 (***console***). EUNSUNG-1003, [345]-[346]. As Mr. Simon explains, “[b]ecause the waste line connects to recovery container 104 and vacuum pump 12 stored within or upon apparatus 10, a POSITA would have understood that Greenberg’s supply line is ‘***connected between***’ Greenberg’s handle 16/102 and apparatus 10.” *Id.*, [346].



Greenberg, FIG. 1

Should Patent Owner argue that a waste line connected to a component located within or upon a console is not “connected between the handpiece and the console,” Petitioner submits that such an interpretation of limitation 1.4 is not supported by the ’607 patent’s disclosure. EUNSUNG-1003, [346]-[347].¹³ Even if it was, it would have been obvious to connect Greenberg’s waste line to an intermediate component, such as a port or receiver, on Greenberg’s apparatus 10 before ul-

¹³ See *supra* note 2.

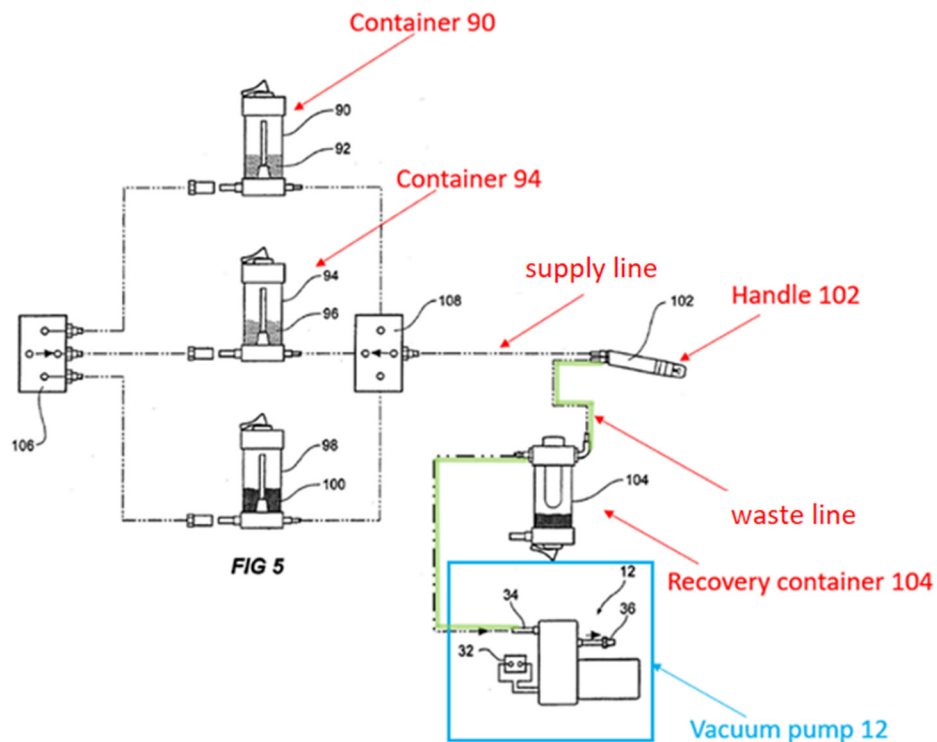
timately connecting to other components located within or upon the console. EUN-SUNG-1003, [348].¹⁴

[1.5] a vacuum source configured to create a vacuum that draws waste material from the handpiece through the waste line for disposal and that draws treatment material from either the first container or the second container to the handpiece when the tip is pressed against skin.

Greenberg's apparatus includes "***vacuum pump 12***" as a "pneumatic source" to "provide[] for an air flow through the recovery container, hand tool and the selected supply container in communication with same, drawing said particles from the supply container through the hand tool and into the recovery container." EUN-SUNG-1006, [0017], [0026], [0004], [0049]-[0059], [0066], FIG. 3; EUNSUNG-1003, [349]-[351].

As depicted below in modified Figure 5, Greenberg's vacuum pump 12 provides a suction through a recovery container (e.g., container 90, 94) and handle 102 (***handpiece***), which (1) draws ***treatment material*** (e.g., standard particles 94 or organic particles 96) from one of the three containers based on the configuration of valves 106, 108 (e.g., container 90 or container 94) to the handpiece via Greenberg's supply line, and (2) draws used treatment material and waste from the handpiece to recovery container 104 via Greenberg's waste line ***for disposal***. EUN-SUNG-1006, [0052]-[0053]; EUNSUNG-1003, [349]-[351], [344]; *see* [1.2].

¹⁴ *See supra* note 3.



Greenberg, Modified FIG. 5

While modified FIG. 5 does not label the path (dotted line) between handle 102 and recovery container 104 and similarly between recovery container 104 and the vacuum pump, it would have been obvious that the path (annotated in green) is defined by a tube, such as FIG. 1's tube 28, and this tube forms the *waste line* as required in [1.4]. EUNSUNG-1003, [344], [349]-[351].

Additionally, Greenberg explains that when aperture 40 (*tip*) “is *positioned against the surface to be treated*, [i.e., skin,] . . . [it] causes air and thus particles to

be drawn from the corresponding [supply]¹⁵ container” through Greenberg’s handpiece and “into the recovery container together with any abraded surface debris.”

EUNSUNG-1006, [0052]; *see also* EUNSUNG-1003, [355].

3. Claim 3

[3] The system of claim 1, further comprising a flow rate controller to adjust a flow rate of the first treatment material or the second treatment material to the handpiece.

Greenberg describes several methods for adjusting the flow rate of the treatment material from the selected supply container. EUNSUNG-1003, [352]-[359].

First, Greenberg states that the supply containers include “an inlet 39 connected to a regulator 42 having an inlet 44 the regulator controlling the amount of air entering the supply container.” EUNSUNG-1006, [0053]. Greenberg explains that “[t]he air entering the supply container aerates the particles, with the magnitude of air flow providing control over the flux or density of particles drawn though the apparatus.” *Id.* A POSITA would have understood ***Greenberg’s regulator 42 as a flow rate controller***, which adjusts the flow rate of the selected treatment material to handle 16/102 by varying the amount of air allowed into the selected supply

¹⁵ The altered portion of Greenberg reads “recovery.” Petitioner submits that the original language is an erratum and should read “supply.” *See* EUNSUNG-1006, [0052], [0053]; EUNSUNG-1003, [325].

container. EUNSUNG-1003, [353].

Second, Greenberg states that an inlet of the supply containers may be connected to compressor 38, which provides pressure to the containers. EUNSUNG-1006, [0054]. When the compressor 38 is turned off, only the force of the suction generated by vacuum pump 12 draws the treatment material to the handpiece. EUNSUNG-1006, [0056]. But when “different or heavier particles” are used or “a greater degree of micro-abrasion” is necessary, compressor 38 can be turned on “to provide [] greater flow rate and particle density.” *Id.*, [0054]. Greenberg explains that “control switch 46” may be used to control the speed and thus the pressure provided by compressor 38. *Id.* A POSITA would have understood ***Greenberg’s control switch 46 as a flow rate controller***, which adjusts the flow rate of the selected treatment material to handle 16/102 by varying the pressure provided by compressor 38 into the selected supply container. EUNSUNG-1003, [354]-[356].

Third, Greenberg describes “a suction regulator 50 that controls the suction provided to the apparatus by the vacuum pump 12.” EUNSUNG-1006, [0057]. A POSITA would have understood ***Greenberg’s suction regulator 50 as a flow rate controller***, which adjusts the flow rate of the selected treatment material to handle 16/102 by varying the amount of suction provided by vacuum pump 12 to Greenberg’s entire system. EUNSUNG-1003, [357].

Fourth, Greenberg describes isolation switches 48 and 32, which control the

operation of the compressor and vacuum pump, respectively. EUNSUNG-1006, [0055]. A POSITA would have understood *Greenberg's isolation switches as flow rate controllers*, which adjust the flow rate of the selected treatment material to handle 16/102 by turning on or off the pressure or suction supplied to the selected supply container by the compressor or vacuum pump. EUNSUNG-1003, [358].

4. Claim 4

[4] The system of claim 3, wherein the flow rate controller is located on the handpiece.

While Greenberg does not explicitly disclose a flow rate controller located on handle 16/102 (*handpiece*), locating a flow rate controller on handle 102 would have been obvious to a POSITA for two reasons. EUNSUNG-1003, [360]-[373].

First, it would have been obvious to a POSITA to locate Greenberg's suction regulator 50 on handle 102. EUNSUNG-1003, [361]-[366]. Locating Greenberg's suction regulator 50 on handle 102 would have been an obvious design choice because it is merely the rearrangement of parts without any "difference in function" or "unexpected results." EUNSUNG-1003, [361]-[363].¹⁶ As evidenced as evidenced by Waldron,¹⁷ locating Greenberg's suction regulator 50 on handle 102 yields expected results without altering the function of Greenberg's system,

¹⁶ See cases cited *supra* note 6.

¹⁷ See *infra* §III.F.1 for a background discussion of Waldron.

and thus would have been “an obvious matter of design choice within the skill of the art.” *Id.*; *Kuhle*, 526 F.2d at 555.

Further, locating Greenberg’s suction regulator 50 on handle 102 would have been obvious to try. EUNSUNG-1003, [364]. As Mr. Simon explains, suction regulator 50 must be placed at some point in the vacuum loop between vacuum pump 12 and aperture 40—thus, a POSITA would have recognized a finite number of identified, predictable locations to locate Greenberg’s suction regulator 50: in apparatus 10 or on handle 102. *Id.* A POSITA would have had “good reason to pursue the known options,” and thus, locating Greenberg’s suction regulator 50 on handle 102 would have been obvious to try. *Id.*; *KSR*, 550 U.S. at 421.

Additionally, a POSITA would have been motivated to locate Greenberg’s suction regulator 50 on handle 102 to allow an operator to more easily adjust the level of suction applied to the treatment area. EUNSUNG-1003, [365]-[366]. A POSITA would have recognized the desirability of being able to easily control the level of suction in Greenberg’s system while performing a microdermabrasion treatment because different treatment areas and patients may require varying levels of suction and treatment material to receive an effective treatment. *Id.*, [366] (discussing EUNSUNG-1031; EUNSUNG-1013; EUNSUNG-1029). A POSITA would have appreciated that it is faster and more convenient for an operator to adjust a flow rate controller mounted on a device that the operator is already holding

than having to reach to a flow rate controller mounted in another location (e.g., on a console). *Id.*, [365]-[366].

Second, a POSITA would have found it obvious to locate Greenberg’s control switch 46 on handle 102. EUNSUNG-1003, [367]-[373]. Greenberg describes control switch 46 as “**usually** a foot control switch.” EUNSUNG-1006, [0054]. A POSITA would have recognized some drawbacks with using a foot control switch and benefits of using a handpiece-mounted control switch. EUNSUNG-1003, [368], [372]. Locating control switch 46 on Greenberg’s handle 102 would have been an obvious design choice because it is merely the rearrangement of parts without any “difference in function” or “unexpected results.” *Id.*, [369]-[370].¹⁸ Additionally, locating control switch 46 on handle 102 would have been obvious to try. *Id.*, [371]. Moreover, a POSITA would have been motivated to locate control switch 46 on handle 102 to eliminate the need for a separate housing for a foot switch—thus reducing manufacturing cost, while retaining ready access for an operator during a procedure. *Id.*, [372].

5. Claim 5

[5] The system of claim 3, wherein the flow rate controller is located on the console.

As discussed in [3], a POSITA would have understood Greenberg’s suction

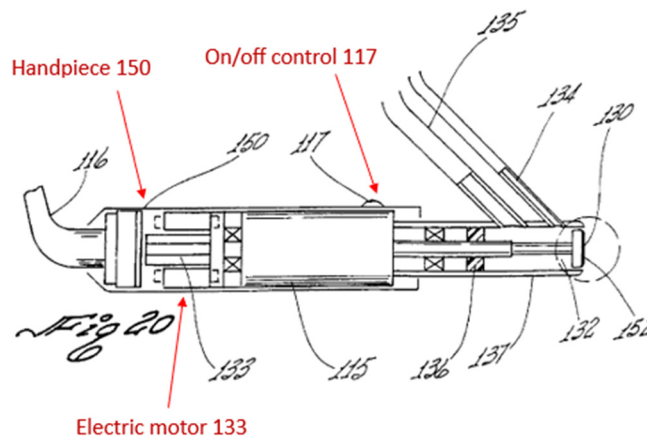
¹⁸ See cases cited *supra* note 6.

regulator 50, inlet regulator 42, and isolation switches 48 and 32 as flow rate controllers. Greenberg discloses that suction regulator 50, inlet regulator 42, and isolation switches 48 and 32 are located on apparatus 10 (*console*). EUNSUNG-1003, [374]-[375] (citing EUNSUNG-1006, [0053]-[0055]; FIG. 1).

F. [GROUND 2B]: Greenberg-Waldron

1. Waldron

See §III.B.1. Waldron further teaches the placement of an on/off control on a microdermabrasion handpiece. EUNSUNG-1003, [66]. In an additional embodiment, Waldron discloses a handpiece with a rotating abrader. EUNSUNG-1033, 6:21-8:7. As depicted below in Figure 20, handpiece 150 includes electric motor 133 to rotate abrader 132. *Id.*, 7:4-25. Electric motor 133 “is activated by the on/off control 117 mounted on the hand piece.” *Id.* Waldron states that “[a]n alternative is to use a foot pedal (not shown) to turn the motor on and off.” *Id.*



Waldron, FIG. 20

2. Claim 4

Greenberg-Waldron renders obvious claim 4 for the same reasons discussed regarding Greenberg. EUNSUNG-1003, [376]; *see* §III.E.4. Greenberg-Waldron further renders obvious claim 4 based on Waldron's teachings in two ways. *Id.*, [376]-[385].

First, a POSITA would have been motivated to replace Greenberg's suction regulator 50 with Waldron's handpiece-mounted flow control valve 52 and vent hole 50. EUNSUNG-1003, [377]-[380]. As explained above in §III.E.4, a POSITA would have been motivated to modify Greenberg's handle 102 to include a means for adjusting the suction in the system because a POSITA would have recognized that it is desirable to adjust the level of suction while performing a microdermabrasion procedure and placing a flow rate controller on handle 102 would have been an obvious solution to allow an operator to easily adjust the suction. EUNSUNG-1003, [377]-[378]; *see* §III.E.4.

As Mr. Simon explains, a POSITA would have recognized Greenberg's suction regulator 50 and Waldron's flow control valve 52 as directly analogous. EUNSUNG-1003, [377], [379]. Replacing Greenberg's suction regulator 50 with Waldron's handpiece-mounted flow control valve 52 would simply be the substitution of one known element (e.g., Greenberg's suction regulator 50) for another (e.g., Waldron's flow control valve 52) to achieve predictable results—i.e., a handpiece-

mounted suction regulator. *Id.*, [380]. This combination would also reflect a use of a known technique to improve similar devices in the same way. *Id.* Moreover, the combination is merely an application of a known technique to a known device ready for improvement. *Id.* A POSITA would have had a reasonable expectation of success given that Greenberg's suction regulator 50 and Waldron's flow control valve 52 function in a similar manner to achieve the same result. *Id.*, [379].

Second, a POSITA would have been motivated to implement Greenberg's control switch 46 as Waldron's handpiece-mounted on/off control 117. EUN-SUNG-1003, [381]-[384]. As discussed above in §III.E.4, a POSITA would have understood Greenberg's statement that control switch 46 is "***usually*** a foot control switch" and "***may be*** a variable switch" as suggesting that control switch 46 may be implemented as an on/off switch somewhere other than a foot controller. EUN-SUNG-1003, [382]. As discussed above in §III.E.4, a POSITA would have recognized drawbacks with using a foot pedal, benefits of using a handpiece-mounted control switch, and that a control switch located on a handpiece is a suitable alternative to a foot control switch. *Id.* A POSITA would have been motivated and found it obvious to implement Greenberg's control switch 46 (depicted in FIG. 1 as a foot controller) as Waldron's on/off control 117 mounted on Greenberg's handle 16/102. *Id.*

A POSITA would have had a reasonable expectation of success in combining Waldron's on/off control 117 with Greenberg's system. EUNSUNG-1003, [383]. For example, a POSITA would have found it obvious to locate Waldron's on/off control 117 on Greenberg's handle 16/102 and use on/off control 117 to control Greenberg's compressor 38 through known methods, for example, a wire connected between the handle 16/102 and apparatus 10—such as the wire depicted in Greenberg FIG. 1 between control switch 46 and apparatus 10. *Id.*

Replacing Greenberg's control switch 46 with Waldron's on/off switch 117 would simply be the substitution of one known element (e.g., Greenberg's control switch 46) for another (e.g., Waldron's on/off switch 117) to achieve predictable results—i.e., a handpiece-mounted compressor control switch. EUNSUNG-1003, [384]. This combination would also reflect a use of a known technique to improve similar devices in the same way. *Id.* Moreover, the combination is merely an application of a known technique to a known device ready for improvement. *Id.*

In the Greenberg-Waldron combination, a POSITA would have understood Waldron's flow control valve 52 and vent hole 50 and/or Waldron's on/off switch 117 as *flow rate controllers for adjusting the flow rate of the selected treatment material to handle 16/102* for similar reasons explained above with respect to Greenberg's suction regulator 50 and control switch 46. EUNSUNG-1003, [385]; *see* §III.E.3. Thus, the combination of Greenberg and Waldron additionally renders

obvious claim 4.

G. [GROUND 2C]: Greenberg-Trueba

1. Greenberg-Trueba Combination

In the Greenberg-Trueba combination, Greenberg's system would have been modified based on Trueba's teachings of computer control and display. EUN-SUNG-1003, [386]-[395]. For example, in the resulting system, Greenberg's valve 106 and/or valve 108 are further controlled by a computer (e.g., Trueba's controller 100), which is controlled by a user input (e.g., Trueba's touch screen 105), to control the flow of treatment solutions from containers (e.g., Greenberg's containers 90, 94, and 98), so that a user can use the user input device to select a flow of fluids from the containers. EUNSUNG-1003, [395]. The combined device also includes a display (e.g., Trueba's touch screen 105) that indicates which solution is being delivered. *Id.*

A POSITA would have been motivated to modify Greenberg's device by including Trueba's computer control and display for various benefits, such as added precision, automation, and clarity. EUNSUNG-1003, [387]-[395]. In fact, as Mr. Simon explains, the same reasons that would have motivated the Karasiuk-Palmer-Trueba combination (*see* §III.C.2) would similarly apply for the Greenberg-Trueba combination. *Id.*, [387].

A POSITA would have had a reasonable expectation of success in implementing the combination given the technical similarities between Greenberg and Trueba. EUNSUNG-1003, [388]. For example, similar to Greenberg, Trueba's system is "for topical application of a bioactive composition to the surface of the subject, such as a patch of skin," and configured for selecting from different treatment materials from different containers. EUNSUNG-1008, 3:22-27, 3:4-8, 5:14-26, 11:4-34, FIG. 3; EUNSUNG-1003, [388]. The Greenberg-Trueba combination would merely constitute the use of a known technique to improve similar devices in the same way. EUNSUNG-1003, [391]-[394]. By the Critical Date, computer (e.g., PLC) controlled fluid delivery systems were well-known. EUNSUNG-1007, FIG. 3; EUNSUNG-1008, FIG. 3; EUNSUNG-1015, Abstract; EUNSUNG-1003, [391]. The modification requires nothing more than automating the manual process in Greenberg with well-known automation techniques. EUNSUNG-1008, 11:4-34; EUNSUNG-1003, [392]-[394] (discussing EUNSUNG-1010, EUNSUNG-1006, EUNSUNG-1011, EUNSUNG-1020).

2. Claims 1, 3-5

Greenberg-Trueba renders obvious claims 1 and 3-5 for the same reasons regarding Greenberg. EUNSUNG-1003, [396], [403]; *see* §III.E.

Greenberg-Trueba further renders obvious [1.3] based on Trueba's teach-

ings. EUNSUNG-1003, [397]-[403]. In particular, to the extent that the term “sequentially” is interpreted to require automatic switching between first and second treatment fluids, Greenberg-Trueba renders this limitation obvious. EUNSUNG-1003, [398]-[414]. As discussed in §III.G.1, Greenberg-Trueba’s system employs “[c]omputerized control of medication dosing, which may be programmed by medical personnel **for subsequent automated delivery**,” as taught by Trueba. EUNSUNG-1008, 6:6-9. A POSITA would have found it obvious to employ Trueba’s automation in Greenberg’s system to provide added precision (avoiding human error), automation, and clarity, resulting in automatic switching and delivery of treatment fluids in a sequential manner. EUNSUNG-1003, [402]-[403]; *In re Vener*, 262 F.2d at 95. Similarly, dependent claims 2-10 that inherit the same subject matter are rendered obvious by Greenberg-Trueba. EUNSUNG-1003, [403].

3. Claim 2

Greenberg-Trueba renders obvious claim 2 for the same reasons discussed above with respect to claims 3-5 and below with respect to claim 7. EUNSUNG-1003, [404]-[407].

4. Claim 6

[6] The system of claim 1, further comprising a computing device configured to control at least one function of the system.

As discussed in §III.G.1, Greenberg-Trueba’s system comprises ***a computing device*** (e.g., Trueba controller 100) configured to control at least one function

(e.g., delivery of fluids) of the system. EUNSUNG-1003, [408]; EUNSUNG-1008, 3:34-38, 4:65-5:17, 6:1-9, 6:27-7:9, 10:52-11:49, 12:2-5, FIG. 1.

5. Claim 7

[7] The system of claim 1, further comprising a user input device to select the first treatment material or the second treatment material for delivery to the hand-piece.

As discussed in §III.G.1, Greenberg-Trueba's system comprises ***a user input device*** (e.g., Trueba's touch screen 105) to select the first treatment material or the second treatment material for delivery to the handpiece. EUNSUNG-1003, [409]; EUNSUNG-1008, 11:42-12:8, FIG. 3.

6. Claim 8

[8] The system of claim 7, wherein the user input device comprises a touch screen.

As discussed in §III.G.1, Greenberg-Trueba's system comprises ***a touch screen*** (e.g., Trueba's touch screen 105). EUNSUNG-1003, [410]; EUNSUNG-1008, 11:40-12:8, FIG. 3.

7. Claim 9

[9] The system of claim 7, wherein the user input device is positioned on the console.

The Greenberg-Trueba combination renders obvious ***positioning a user input device*** (e.g., Trueba's touch screen 105) ***on a console*** (e.g., Greenberg's apparatus 10). EUNSUNG-1003, [411]-[420]. In fact, as Mr. Simon explains, the same

reasons that would have motivated a POSITA to position Trueba's touch screen 105 on Palmer's mobile cart 170 (Ground 1C) would similarly motivate a POSITA to position Trueba's touch screen 105 on Greenberg's apparatus 10. EUNSUNG-1003, [411]-[420]; *see* §III.C.7.

8. Claim 10

[10] The system of claim 1, wherein the console comprises a display.

As discussed in §III.G.1, Greenberg-Trueba's system includes *a display* (e.g., Trueba's touch screen 105) indicating which solution is being delivered. As discussed in [9], a POSITA would have found it obvious to place a display (e.g., Trueba's touch screen 105) on Greenberg's apparatus 10 (*console*). EUNSUNG-1003, [421]; *see* §III.G.7.

9. Claims 11-19

Claim 11 claims similar subject matter recited in claims 1 and 6. EUNSUNG-1003, [422].¹⁹ Claims 12-19 claim similar subject matter recited in claims 2-5 and 7-10. EUNSUNG-1003, [434], [439]-[445]. The combination of Greenberg and Trueba renders these claim features obvious for similar reasons to those discussed above with respect to claims 1-10. EUNSUNG-1003, [422]-[445].

10. Claim 20

Claim 20 claims similar subject matter recited in claim 1 and claim 2, which

¹⁹ *See supra* note 10.

in turn claims similar subject matter recited in claims 3-5 and 7. EUNSUNG-1003, [446]. The combination of Greenberg and Trueba renders these claim features obvious for similar reasons discussed with respect to claims 1 and 2. EUNSUNG-1003, [446]-[456].

H. [GROUND 2D]: Greenberg-Trueba-Waldron

1. Claims 2, 4, 12, 14, 20

Greenberg-Trueba-Waldron renders obvious claims 2, 4, 12, 14, and 20 for the same reasons discussed regarding Greenberg-Trueba. EUNSUNG-1003, [457]; *see* §III.G. Greenberg-Trueba-Waldron further renders obvious claims 2, 4, 12, 14, and 20 based on Waldron's teachings for similar reasons as those explained above in §III.F.2. EUNSUNG-1003, [457].

IV. DISCRETIONARY CONSIDERATIONS

A. §325(d)

Discretionary denial is not warranted. Palmer and Trueba were not cited by the Office, let alone applied in a rejection. *See* §II.B. While Karasiuk, Greenberg, and Waldron were cited in a lengthy IDS, they were not addressed substantively during examination. *Id.*

Because the '607 patent's prosecution did not involve negotiation regarding the prior art combinations applied, Grounds 1A-1D and 2A-2D cannot be said to be the same as, or substantially similar to, art or arguments that the Office previ-

ously considered. To the extent Karasiuk, Greenberg, and Waldron were previously considered, the Examiner erred in overlooking the teachings cited in this Petition. The Examiner also did not have the benefit of considering their teachings in combination with Palmer or Trueba.

V. FEES

Please apply any fees to Deposit Account No. 06-1050.

VI. CONCLUSION

Petitioner requests cancellation of all Challenged Claims.

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

A. Real Party-In-Interest Under 37 C.F.R. § 42.8(b)(1)

Petitioner, Eunsung Global Corp., is the real party-in-interest.

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

Petitioner is not aware of any disclaimers, reexamination certificates or petitions for *inter partes* review for the '607 patent. The '607 patent is the subject of ongoing litigation in:

- *HydraFacial LLC et al v. eMIRAméd USA LLC et al*, 8-24-cv-01865 (CDCA)
- *HydraFacial LLC v. Luvo Medical Technologies et al*, 2-24-cv-00587 (DUT)
- *Certain Hydrodermabrasion Systems and Components Thereof III*; Inv. No. 337-TA-1417 (Violation) 337-TA-1417 (ITC)

C. Lead And Back-Up Counsel Under 37 C.F.R. § 42.8(b)(3)

Eunsung provides the following designation of counsel.

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D. Service Information

Please address all correspondence and service to the address listed above.

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Respectfully submitted,

Dated: January 13, 2025

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 13,953 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated: January 13, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4)(i) et seq. and 42.105(b), the undersigned certifies that on January 13, 2025, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided by Federal Express, to the Patent Owner, by serving the correspondence address of record as follows:

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