

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

**Before the MaryJoan McNamara
Administrative Law Judge**

In the Matter of

**CERTAIN HYDRODERMABRASION
SYSTEMS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-1408

**RESPONDENT CARTESSA AESTHETICS, LLC'S SECOND SUPPLEMENTAL
RESPONSE TO COMPLAINANT HYDRAFACIAL, LLC'S INTERROGATORY 17**

Pursuant to 19 C.F.R. §§ 210.27 and 210.29 and Ground Rule 3 *et seq.*, Respondent Cartessa Aesthetics, LLC hereby submits its second supplemental objections and responses to Complainant HydraFacial LLC f/k/a Edge Systems, LLC's Interrogatory No. 17.

Cartessa incorporates by reference, as if set forth fully herein, its Preliminary Statement and General Objections as set forth in its Initial and First Supplemental Objections and Responses to Complainant HydraFacial LLC's First Set of Interrogatories.

**SECOND SUPPLEMENTAL OBJECTIONS
AND RESPONSES TO INTERROGATORY NO. 17**

Cartessa incorporates by references, as if set forth fully herein, its specific objections to this Interrogatory as set forth in its Initial and First Supplemental Objections and Responses to Interrogatory No. 17.

Subject to and without waiving the foregoing General and specific objections, Cartessa further responds as follows:

Complainant has asserted claims 1, 2-10, 11, 12, 14-20, 22, 23-25, 26, 28-36, 37, and 39-45 of U.S. Patent No. 11,865,287 ("287 Patent") against Cartessa. *See* Complaint. Under 35

U.S.C. §§ 102 and/or 103, each Asserted Claim of the Asserted Patent is invalid as anticipated or obvious in view of the prior art or combinations of prior art identified below and in the accompanying exhibits.

I. PRELIMINARY STATEMENT

These invalidity contentions are preliminary and do not address claim construction, noninfringement, or invalidity based on 35 U.S.C. §112. Cartessa reserves all rights with respect to such issues, including their position that claims of the Asserted Patent should be construed in a particular manner and/or are not infringed. These invalidity contentions are based on Cartessa's current knowledge, understanding, and belief of the Asserted Patent and prior art, of Complainant's infringement theories (as disclosed in Exhibit 3 of the Complaint), and of the facts and other information available as of the date of these invalidity contentions. Cartessa's investigation, discovery, and analysis of information related to this action is ongoing. Additional discovery and/or orders from the Administrative Law Judge may require Cartessa to amend or supplement these invalidity contentions, and Cartessa expressly reserves the right to do so as the case proceeds. These contentions represent Cartessa's good-faith effort to provide a comprehensive identification of prior art relevant to this case, but Cartessa reserves the right to modify or supplement their prior art list and invalidity contentions later with, or based on, pertinent information that may be later discovered.

A. No Waiver.

Nothing in these invalidity contentions is intended, nor should be construed, as a waiver of any claim construction argument, noninfringement position, or argument under 35 U.S.C. § 112. Cartessa's statements herein (including the accompanying claim charts) reflect Cartessa's present understanding of the purported scope of the claims as alleged by Complainant in its Complaint (as best those contentions can be understood in light of their present deficiencies). For the avoidance

of doubt, these contentions are not intended to present or argue in favor of any construction of the Asserted Claims, and Cartessa expressly reserves the right to present constructions that differ from any construction that may be alleged to underlie these contentions. These invalidity contentions do not constitute an acquiescence to Complainant's interpretation of any claims to the extent they depart from the plain meaning of the Asserted Claims and from the proper scope of the claims as may be later construed by the Administrative Law Judge. Cartessa disagrees with Complainant's apparent positions as to the purported scope of the Asserted Claims to the extent they seek to expand the scope of the Asserted Claims beyond their proper construction and to the extent those apparent positions can be understood from Complainant's infringement contentions to date.

The Asserted Claims have not yet been construed by the Administrative Law Judge and, thus, Cartessa has not yet had the opportunity to compare the Asserted Claims of the Asserted Patent (as construed by the Administrative Law Judge) with the prior art. Cartessa reserves the right to amend, supplement, or materially modify its invalidity contentions after the claims have been construed by the Administrative Law Judge. Cartessa also reserves the right to amend, supplement, or materially modify its invalidity contentions in response to any claim construction positions that Complainant may take. Cartessa also reserves the right to assert that a claim is indefinite, not enabled, or fails to meet the written description requirement of 35 U.S.C. § 112 based on any claim construction position Complainant may take in this case or based on any claim construction the Administrative Law Judge may adopt in this case. Moreover, Cartessa reserves the right to rely on un-cited portions of the identified prior art, other prior art, or expert testimony to provide context to or aid in understanding the cited portions of the identified prior art. Furthermore, where Cartessa cites a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the

figure. Similarly, where Cartessa cites a particular text referring to a figure, the citation should be understood to include the corresponding figure as well. Cartessa may also rely on other documents and information, including cited references and the prosecution history for the Asserted Patent, and expert testimony to provide context or to aid in understanding the cited portions of the references. To the extent any additional documents are incorporated by reference within any prior art document, those incorporated-by-reference documents should be understood to be included within the scope of these disclosures. Cartessa incorporates by reference, in full, all prior art references cited during examination of the Asserted Patent, or any related patent or patent application. Cartessa also incorporates by reference, in full, all prior art references cited during examination of any patent application incorporated by reference or otherwise referenced in the Asserted Patent. Cartessa further incorporates by reference, in full, the Petition for Inter Partes Review of United States Patent No. 11,865,287, filed on September 30, 2024.

Cartessa has endeavored to cite the most relevant portions of the identified prior art. However, other portions of the identified prior art may additionally disclose, either expressly or inherently, and/or render obvious one or more elements of the Asserted Claims. Cartessa reserves the right to rely on un-cited portions of the identified prior art to establish the invalidity of the Asserted Claims.

B. No Admission.

Nothing disclosed herein is an admission or acknowledgment that any product accused of infringement by Complainant in its Infringement Contentions (the “Accused Products”), or any of Cartessa’s other products or services, infringes any of the Asserted Claims.

To the extent that any of the prior art references disclose the same functionality or feature of any of the Accused Products, Cartessa reserves the right to argue that said feature or functionality does not practice any element of any of the Asserted Claims, and to argue, in the

alternative, that if said feature or functionality is found to practice any element of any of the Asserted Claims, then the prior art reference demonstrates that the element is not novel, is obvious, and/or is otherwise not patentable.

Attached are representative claim charts that identify where the elements of the Asserted Claims of the Asserted Patent may be found in the prior art or rendered obvious in view of the prior art. The references cited in the attached claim charts may disclose the limitations of the Asserted Claims expressly and/or inherently. The suggested obviousness combinations may be presented in conjunction with or in the alternative to Cartessa's contentions regarding anticipation. These obviousness combinations should not be construed to suggest that any reference included in any combination is not anticipatory in its own right. Further, to the extent that Complainant contends that any of the references identified do not constitute prior art under 35 U.S.C. § 102, Cartessa reserve the right to rely upon other prior art references in the same patent family with substantially identical disclosures as evidence of invalidity based on the same theories as those disclosed below.

C. Reservation of Rights.

Cartessa reserves the right to amend these Invalidity Contentions in response to Complainant's Interrogatory No. 17. Further, Cartessa reserves the right to revise, amend, and supplement the information provided herein, including identifying and relying on additional references should Cartessa's further discovery and investigation yield additional information or references, consistent with the Ground Rules. Moreover, Cartessa reserves the right to revise its ultimate contentions concerning the invalidity of the Asserted Claims, which may change depending upon any findings as to the priority date of the Asserted Claims or positions that Complainant or its fact or expert witness(es) may take concerning infringement or invalidity issues.

Prior art not included in this disclosure, whether known or not known to Cartessa, may become relevant. In particular, Cartessa is currently unaware of the extent, if any, to which Complainant will contend that limitations of the Asserted Claims are not disclosed in the prior art identified by Cartessa. To the extent that such an issue arises, Cartessa reserves the right to identify other references that would have made the addition of the alleged missing limitation to the disclosed device obvious.

The accompanying invalidity claim charts list specific examples of where prior art references disclose, either expressly or inherently, each limitation of the Asserted Claims or examples of disclosures in view of which a person of ordinary skill in the art would have considered each limitation, and therefore the claim as a whole, obvious. Cartessa has endeavored to cite the most relevant portions of the identified prior art. However, other portions of the identified prior art may additionally disclose, either expressly or inherently, and/or render obvious one or more elements of the Asserted Claims. Cartessa reserves the right to rely on un-cited portions of the identified prior art to establish the invalidity of the Asserted Claims. Moreover, Cartessa reserves the right to rely on un-cited portions of the identified prior art, other prior art, or expert testimony to provide context to or aid in understanding the cited portions of the identified prior art. Furthermore, where Cartessa cites a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the figure. Similarly, where Cartessa cites a particular text referring to a figure, the citation should be understood to include the corresponding figure as well. Cartessa may also rely on other documents and information, including cited references and the prosecution history for the Asserted Patent, and expert testimony to provide context or to aid in understanding the cited portions of the references. To the extent any additional documents are incorporated by reference within any prior

art document, those incorporated by reference documents should be understood to be included within the scope of these disclosures.

Cartessa incorporates by reference, in full, all prior art references cited during examination of the '287 Patent or any related patent or patent application. Cartessa also incorporates by reference, in full, all prior art references cited during examination of any patent application incorporated by reference or otherwise referenced in the Asserted Patent.

To the extent Complainant believes the Asserted Patent is entitled to a priority date earlier than the filing dates of each Asserted Patent, it is Complainant's burden to establish this earlier filing date. Complainant has not satisfied this burden here. Reserving their right to amend as discovery continues, Cartessa provides these Invalidity Contentions without conceding that the '287 Patent is entitled to a December 30, 2005, priority date.

Cartessa, however, believes the '287 Patent is not entitled to the December 30, 2005, priority date of U.S. Provisional Patent Application 60/775,310 filed on December 5, 2005, or U.S. Provisional Patent Application 60/764,668 filed on February 2, 2006. A patent application "is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. §112." *In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995) (emphasis added) (citing *Mendenhall v. Cedarapids Inc.*, 5 F.3d 1557, 1566 (Fed. Cir. 1993). Section 112(a) requires a patent application to enable an ordinarily skilled artisan to make and use the invention. *See* 35 U.S.C. § 112. Independent claims 1, 26, and 37 of the '287 Patent recite a "block," independent claim 11 of the '287 Patent recites a "fluid control member," and independent claim 22 of the '287 Patent recites a "collection lumen." None of these features appears to be supported by either provisional application or any other disclosure by Complainant prior to U.S. Patent Application No.

18/094,884, which was filed on January 9, 2023. Therefore, for purposes of invalidity contentions, Cartessa submits the priority date entitled by the '287 Patent is January 9, 2023.

All patents listed or referred to herein are United States patents or publications unless otherwise noted. On information and belief, each listed publication or invention became prior art at least as early as the dates given.

Cartessa reserves the right to prove the invalidity of the Asserted Claims on basis other than those required to be disclosed in these disclosures and contentions pursuant to the proposed scheduling order.

The prior art identified herein, as well as the "References Cited" on the face of the Asserted Patent that are not explicitly identified below, may provide background and context pertinent to the teachings and interpretation of the invalidating prior art referenced by the invalidity claim charts. This prior art is only exemplary and is not in any way intended to limit the scope of what one of ordinary skill in the art would have understood at the time of the alleged invention. Cartessa reserves the right to rely upon additional prior art, information, and/or knowledge to demonstrate what one of ordinary skill would have understood prior to the dates of alleged invention of the Asserted Patent. The accompanying prior art, art cited, and arguments made in the patent prosecution history, as well as the "References Cited" on the face of the Asserted Patent (which are incorporated herein by reference), are illustrative of the general state of the art to which the Asserted Patent pertains (*i.e.*, what one of ordinary skill in the art would have understood) at a time prior to the dates of alleged invention of the Asserted Patent.

Prior art not currently included in this disclosure may become relevant. Cartessa is currently unaware of the extent, if any, to which Complainant will contend that limitations of the Asserted Claims are not disclosed in the prior art identified by Cartessa. Cartessa reserves the right

to identify other references that would have made the addition of the allegedly missing limitation to the disclosed device or method obvious or show that the allegedly missing limitation would have been known or readily apparent to one of ordinary skill in the art at the time of the invention in light of the disclosure of the prior art at issue. Cartessa further reserves the right to rely on any of the references being produced herewith in order to demonstrate the state of art at the alleged times of invention and as evidence of the knowledge of one of ordinary skill in the art in support of any motivations to modify or combine the charted prior art references with other references or knowledge.

Complainant has not yet produced other prior art of which it may be aware but is not yet known to Cartessa. Cartessa may seek to supplement its invalidity contentions with prior art contained in such production once Cartessa has had a fair opportunity to review, analyze, and chart such prior art. Cartessa reserves the right to amend its invalidity contentions with any additional potential prior art known by Complainant but not yet disclosed to Cartessa.

Cartessa reserves the right to rely on all documents produced by Respondent Eunsung Global Corp., as well as Complainant, any predecessors in interest, the named inventors, and any other third parties, as discovery pertaining to these systems and references is ongoing.

Cartessa provides these invalidity contentions only for the claims asserted by Complainant, but they reserve the right to seek invalidation of all claims in the Asserted Patent.

D. Ongoing Investigation.

Cartessa's investigation is ongoing, and Cartessa expressly reserves the right to amend its disclosures and document production to account for evidence uncovered as its investigation continues. Such amendments include identifying and relying on additional references that may result from Cartessa's further search and analysis. Cartessa reserves the right to supplement these contentions in light of any additional prior art of which Complainant is aware and did not disclose

to Cartessa in discovery, or that might be subsequently disclosed by Complainant in response to Cartessa's discovery requests. Cartessa may seek discovery from third parties believed to have knowledge, documentation and/or corroborating evidence concerning some of the prior art listed herein and/or additional prior art. Cartessa reserves the right to supplement these contentions in light of any newly discovered information produced by these or other companies from which Cartessa may seek discovery.

II. GENERAL STATE OF THE ART AT THE TIME OF THE ALLEGED INVENTIONS

The prior art identified herein, as well as "References Cited" on the face of the Asserted Patent that are not explicitly identified below, may provide background and context pertinent to the teachings and interpretation of the invalidating prior art referenced by the invalidity claim charts. This prior art is only exemplary and is not in any way intended to limit the scope of what one of ordinary skill in the art would have understood at the time of the alleged invention. Cartessa reserves the right to rely upon additional prior art, information, and/or knowledge to demonstrate what one of ordinary skill would have understood prior to the dates of alleged invention of the Asserted Claims of the Asserted Patent. The accompanying prior art, art cited and arguments made in the patent prosecution history, as well as the "References Cited" on the face of the Asserted Patent (which is incorporated herein by reference), are illustrative of the general state of the art to which the Asserted Patent pertains, (*i.e.*, what one of ordinary skill in the art would have understood) at a time prior to the dates of the alleged invention of the Asserted Claims of the Asserted Patent.

III. STANDARDS

A. Anticipation Standard

A prior art reference is anticipating when it is enabling and describes the invention “sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.” *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

B. Obviousness Standard

The U.S. Supreme Court decision in *KSR* held that a claimed invention can be obvious even if there is no explicit written teaching, suggestion, or motivation for combining the prior art to produce that invention. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 414-15 (2007) (“*KSR*”). Accordingly, Cartessa believes that no showing of an express motivation to combine prior art is required to combine the references disclosed in the Exhibits. Each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of ordinary skill in the art. *See KSR* at 415 (rejecting the Federal Circuit’s “rigid” application of the teaching, suggestion, or motivation to combine test, and instead espousing an “expansive and flexible” approach). The Supreme Court in *KSR* held that a person of ordinary skill in the art is “a person of ordinary creativity, not an automaton” and “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 421. “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim.” *Id.* at 419. “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* at 420. In particular, the Supreme Court emphasized the principle that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. A key inquiry is whether the “improvement is

more than the predictable use of prior art elements according to their established functions.” *Id.* at 417.

The rationale to combine or modify prior art references is significantly stronger when the references seek to solve the same problem, come from the same field, and correspond well. In *In re Inland Steel Co.*, 265 F.3d 1354 (Fed. Cir. 2001), the Federal Circuit allowed two references to be combined as invalidating art when “[the prior art] focus[es] on the same problem that the . . . patent addresses. . . . Moreover, both [prior art references] come from the same field. . . . Finally, the solutions to the identified problems found in the two references correspond well.” *Id.* at 1362.

Although Cartessa contends that no specific showing of motivation to combine is necessary for the references cited in the attached Exhibits, below, in the obviousness sections for the Asserted Patent (Section IV.C), Cartessa identifies motivations and reasons to combine the cited art. One or more combinations of the prior art references identified herein would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior art references identified because there were only a finite number of predictable solutions or because known work in one field of endeavor prompted variations based on predictable design incentives or market forces either in the same field or a different one. In addition, the combination of prior art references identified would have been obvious because the combinations represent known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior art references identified in the attached Exhibits that includes the interrelated teachings of multiple

prior art references; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims; the existence of a known need or problem in the field of the endeavor at the time of the invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art. Thus, a skilled artisan seeking to solve this problem would look to these cited references in combination.

IV. THE '287 PATENT IS INVALID

A. Identification of Prior Art

Cartessa contends that the prior art references charted in Exhibits A-D hereto and/or described below anticipate and/or render obvious, alone or in combination, one or more of the Asserted Claims of the '287 Patent.

Exhibit	Country and Patent Number or Title, Author, and Publisher (where feasible)	Issue or Publication Date
A	U.S. Patent No. 6,695,853 (“Karasiuk”)	February 24, 2004
A	GB2,325,462A (“O’Farrell”)	November 25, 1998
A	U.S. Patent No. 6,669,053 (“Garson”)	December 30, 2003
A	U.S. Pat. Publ. 2004/0144800A1 (“Danby”)	July 29, 2004
A	WIPO PCT Publ. WO 01/41651 A2 (“Waldron”)	June 24, 2001
A	U.S. Patent No. 6,390,815 (“Pond”)	May 21, 2002
A	U.S. Patent No. 5,150,819 (“Johnson”)	September 29, 1992
B	U.S. Patent No. 6,695,853 (“Karasiuk”)	February 24, 2004
B	U.S. Patent No. 5,199,604 (“Palmer”)	April 6, 1993
C	U.S. Patent No. 6,695,853 (“Karasiuk”)	February 24, 2004
C	U.S. Patent No. 5,199,604 (“Palmer”)	April 6, 1993
C	U.S. Patent No. 6,684,880 (“Trueba”)	June 5, 2003
D	U.S. Pat. Pub. 2003/0093089 (“Greenberg”)	May 15, 2003
D	U.S. Patent No. 6,684,880 (“Trueba”)	June 5, 2003

B. The '287 Patent is Anticipated by the Prior Art

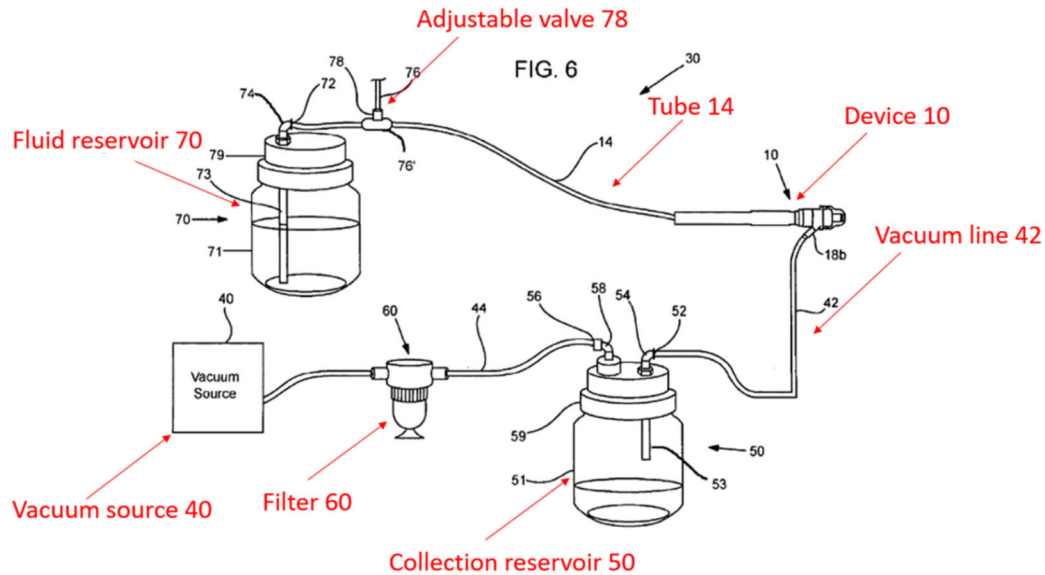
Some or all of the Asserted Claims of the '287 Patent are invalid as anticipated under 35 U.S.C. § 102 in view of each of the prior art references identified in the claim charts included in

Exhibits A-D, which identify specific examples of where each limitation of the Asserted Claims is found in the prior art references. As explained above, the cited portions of prior art references identified in the attached claim charts are exemplary in nature and representative of the content and teaching of the prior art references, and should be understood in the context of the reference as a whole and as they would be understood by a person of ordinary skill in the art.

To the extent any item of prior art cited above is deemed not to disclose, explicitly or inherently, any limitation of an asserted claim of the '287 Patent, Cartessa reserves the right to argue that any difference between that prior art and the corresponding patent claim would have been either inherent in the art or obvious to a person of ordinary skill in the art, even if Cartessa has not specifically denoted that the art is to be combined with the knowledge of a person of ordinary skill in the art. To the extent that Cartessa has not identified any corresponding prior art reference disclosure for any claim limitation(s) in any of the charts identified above, that is not an admission that the reference does not anticipate or render obvious that limitation. Cartessa expressly reserves the right to contend that the reference anticipates or renders obvious the limitation based on the knowledge of a person of ordinary skill in the art.

1. Karasiuk

Karasiuk's system conducts microdermabrasion procedures using a handpiece that delivers (from fluid reservoir 70) a fluid treatment solution and retrieves the resulting waste/debris (into collection reservoir 50). Karasiuk at Abstract, 5:4-42, 7:65-8:44, FIG. 6.



Karasiuk, FIG. 6 (annotated).

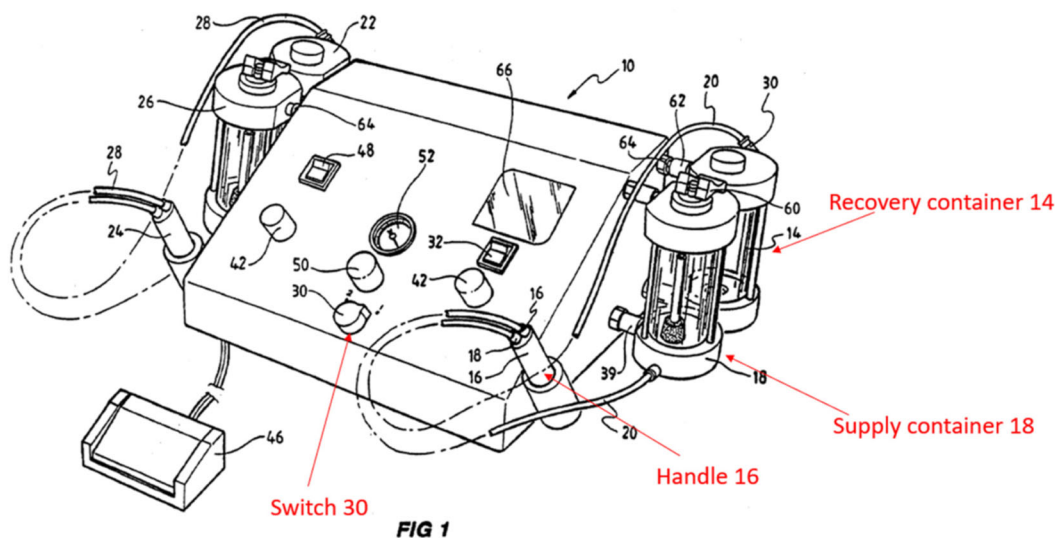
Karasiuk's system includes handpiece 10 (also referred to as "device 10"), vacuum source 40, and fluid reservoir 70. Karasiuk, 6:52-67. Handpiece 10 is connected to collection reservoir 50 and vacuum source 40 by a vacuum line (*e.g.*, vacuum lines 42, 44, and/or 46), and also connected to fluid container 70 via tube 14. Karasiuk, 7:17-45.

In operation, "the fluid contents in fluid reservoir 70 are drawn through tube 14 and into device 10 where they flow out of the functional block 16 through openings 16d and are applied to the skin." Karasiuk, 7:65-8:22. "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." Karasiuk, 8:31-45.

Claims 15 and 16 of the '287 Patent are anticipated by Karasiuk, as Karasiuk teaches each and every limitation. *See* Exhibits A, B, C. Karasiuk predates the '287 Patent and constitutes prior art that renders claims 15 and 16 of the '287 Patent unpatentable for lack of novelty under 35 U.S.C. §102.

2. Greenberg

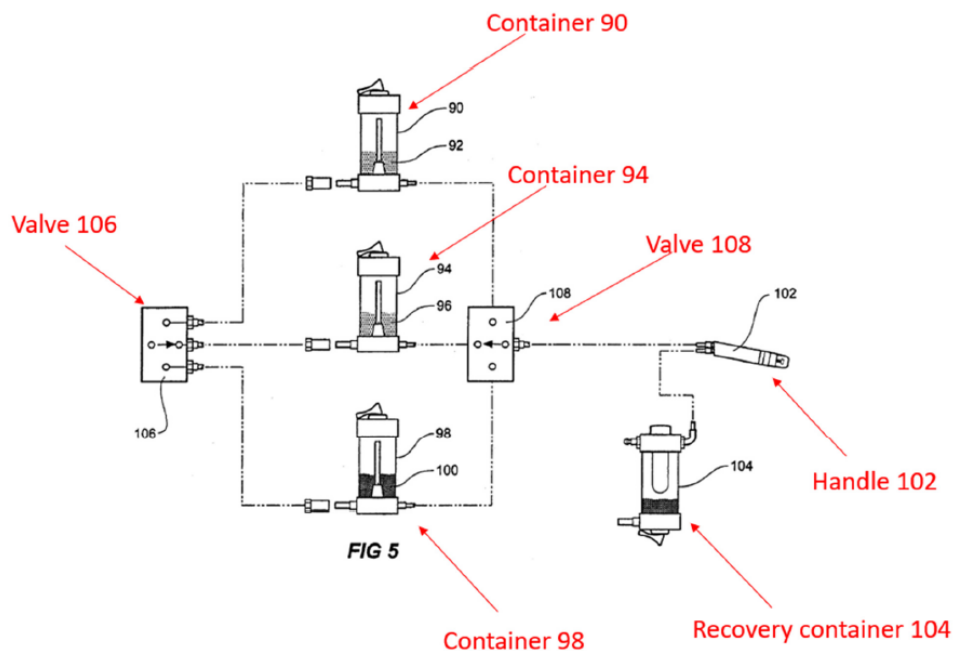
Greenberg describes a system for conducting microdermabrasion procedures using a handpiece (*e.g.*, hand tool 16) to apply treatment materials to a targeted area of skin. Greenberg, Abstract, [0049]-[0064], FIG. 1.



Greenberg, FIG. 1 (annotated).

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"; (3) "a valve selectively connecting said pneumatic source, recovery container and hand tool to a selected one of said supply containers." Greenberg, [0013]-[0016]. In operation, the pneumatic source, such as "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." Greenberg, [0017], [0026], [0004], [0049]-[0059], [0066], FIG. 3.

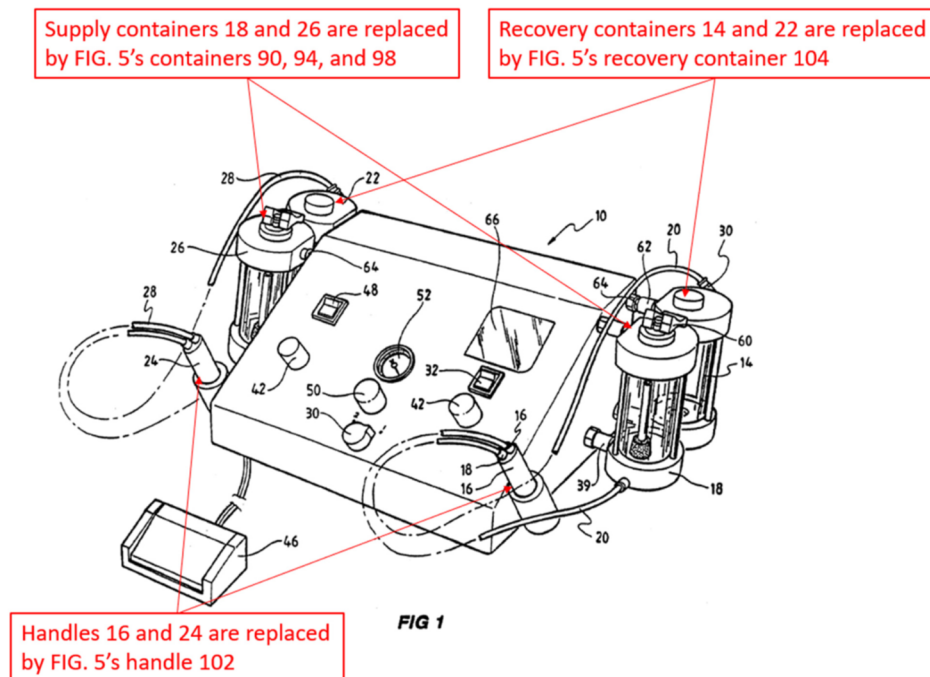
Greenberg's system allows "a choice of different particles to use in a micro-dermabrasion machine," "with a plurality of supply containers housing different particles." Greenberg, [0073]-[0077]. In FIG. 5, Greenberg's device includes three supply containers (e.g., containers 90, 94, and 98), and valves 106 and 108 control which container is connected to handpiece 102 and recovery container 104. Greenberg, [0077]. 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." *Id.*



Greenberg, FIG. 5 (annotated).

As recognized in Greenberg, FIG. 5's implementation would have been readily incorporated into FIG. 1's apparatus. Greenberg, [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.



Greenberg, FIG. 1 (annotated in red)

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. Various other structures described with respect to FIGS. 1-4 would have been similarly applicable for the FIG. 5 implementation. 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. Greenberg, [0053], [0062], FIG. 1. The same mechanism and operation described for FIG. 1 would have been used for FIG. 5's implementation.

Claims 1-3, 8-12, 14-16, 22-23, 26, 28-29, 34-37, 39-40, and 45 of the '287 Patent are anticipated by Greenberg, as Greenberg teaches each and every limitation. *See* Exhibit D. Greenberg predates the '287 Patent and constitutes prior art that renders the identified claims of the '287 Patent unpatentable for lack of novelty under 35 U.S.C. §102.

C. The '287 Patent is Obvious Over the Prior Art

To the extent Complainant argues that any limitation of the asserted claims of the '287 Patent are not explicitly disclosed by an item of prior art identified above and in Exhibits A-D, any purported differences are such that the claimed subject matter as a whole would have been obvious to one skilled in the art at the time of the alleged invention, in view of the state of the art and knowledge of those skilled in the art. The item of prior art would, therefore, render the relevant claims invalid as obvious under 35 U.S.C. § 103.

Cartessa reserves the right to rely on any claim chart in Exhibits A-D standing alone, in combination with any of the references listed in those charts, in combination with any Prior Art identified by Complainant, and/or in view of the knowledge of a person of ordinary skill in the art.

The standard for obviousness is set forth above (§III.B), which is incorporated herein. The motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and: (1) the nature of the problem being solved; (2) the express, implied and inherent teachings of the prior art; (3) the knowledge of persons of ordinary skill in the art; (4) the fact that the prior art is generally directed towards relevant methods and systems; or (5) the predictable results obtained in combining the different elements of the prior art.

A person of ordinary skill at the time of the alleged invention had reason to combine or modify one or more of the references listed and charted in Exhibits A-D, in light of the knowledge of a person of ordinary skill in the art at the time of the invention and information in the prior art cited herein. The reasons or motivation to combine the prior art would include, for example, the fact that the prior art for the Asserted Claims is in the same field, and one of ordinary skill in the art implementing a device, system, or method in accordance with the Asserted Claims would have been motivated to investigate the various related existing devices, systems, methods, publications,

or patents identified in these contentions to address the particular needs. Indeed, the claimed subject matter required nothing more than combining prior art elements according to known methods to yield predictable results. One of ordinary skill in the art would have been motivated to combine the prior art, in that doing so required only simple substitutions of one known element for another to obtain predictable results.

To the extent any piece of prior art refers to or discusses other pieces of prior art, either expressly or inherently, it would have been obvious to combine those pieces of prior art for that reason. In addition, design incentives and other market forces would have prompted those combinations and modifications. Furthermore, prior art references may arise from common assignees or multiple companies operating within the relevant subject matter. The motivation to combine references includes the common objectives and subject matter of the identified references. Accordingly, the teachings of the individual prior art references, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the asserted patents, would render obvious the Asserted Claims.

Many of the applied references herein are in the same field of technology of skin treatment apparatuses and methods for treating a person's skin. The claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would yield nothing more than predictable results to one of ordinary skill in the art. *KSR*, 550 U.S. at 416, 82 USPQ2d at 1385; *B/E Aerospace, Inc. v. C&D Zodiac, Inc.*, 962 F.3d 1373, 1379, 2020 USPQ2d 10706 (Fed. Cir. 2020); *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); *Great Atl. & P. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

Furthermore, it would have been obvious that the substitution of one known skin treatment device in one reference for another would yield predictable results to one of ordinary skill in the art. Furthermore, to any extent that a skin treatment device in one reference is viewed as an improvement over the base reference, one of ordinary skill in the art would have been capable of applying this known device to the “base” device in the prior art and the results would have been predictable to one of ordinary skill in the art. Furthermore, it would have been obvious for a person of ordinary skill to try to combine the skin treatment devices or components thereof in the references to the base reference, based on the recognized problems stated in the references, and one of ordinary skill in the art could have pursued these known potential solutions with a reasonable expectation of success. *KSR*, 550 U.S. at 421, 82 U.S.P.Q.2d at 1397.

The '287 Patent is directed to a physical location and orientation of handheld medical instruments (*e.g.*, “a body comprising a housing,” “a working end portion positioned along a first end” *etc.*), larger structures that interact with the handheld portion (*e.g.*, “at least two fluid containers” in communication with the handheld portion), operation of the device as it interacts with a patient (“skin interfaces configured to contact the skin surface during use”), electronic operation of the system (*e.g.*, the “console comprises a display [which] comprises a user input device,” “a touch screen,” *etc.*), and transportation of treatment media through interconnected conduits (*e.g.*, “a suction force is created within the waste conduit and along the tip, thereby removing waste,” “manifold is configured to control a flow of treatment material,” *etc.*). Each of these features is conventional and yields predictable results when combined with each other claimed feature. Thus, the Asserted Claims of the '287 Patent would have been obvious to a person of ordinary skill in the art at the time of the alleged invention.

Multiple teachings, suggestions, and/or reasons to modify any of the references and/or to combine any two or more of the references in Exhibits A-D come from many sources, including the prior art (specific and as a whole), common knowledge, common sense, predictability, expectations, industry trends, design incentives or need, market demand or pressure, market forces, obvious to try, the nature of the problem faced, and/or knowledge possessed by one of ordinary skill.

In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of predictable solutions. The combination of prior art references identified in these contentions would have been obvious because the combination represents the known potential options with a reasonable expectation of success. Additionally, one of ordinary skill in the art would have been motivated to create combinations identified in these contentions using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or teaching, suggestion, or motivation in the prior art generally.

Accordingly, one of ordinary skill in the art would have been motivated to combine references as described below with a reasonable expectation of success for numerous reasons. The following are exemplary, non-exhaustive motivations to combine two or more references in Exhibits A-D with a reasonable expectation of success.

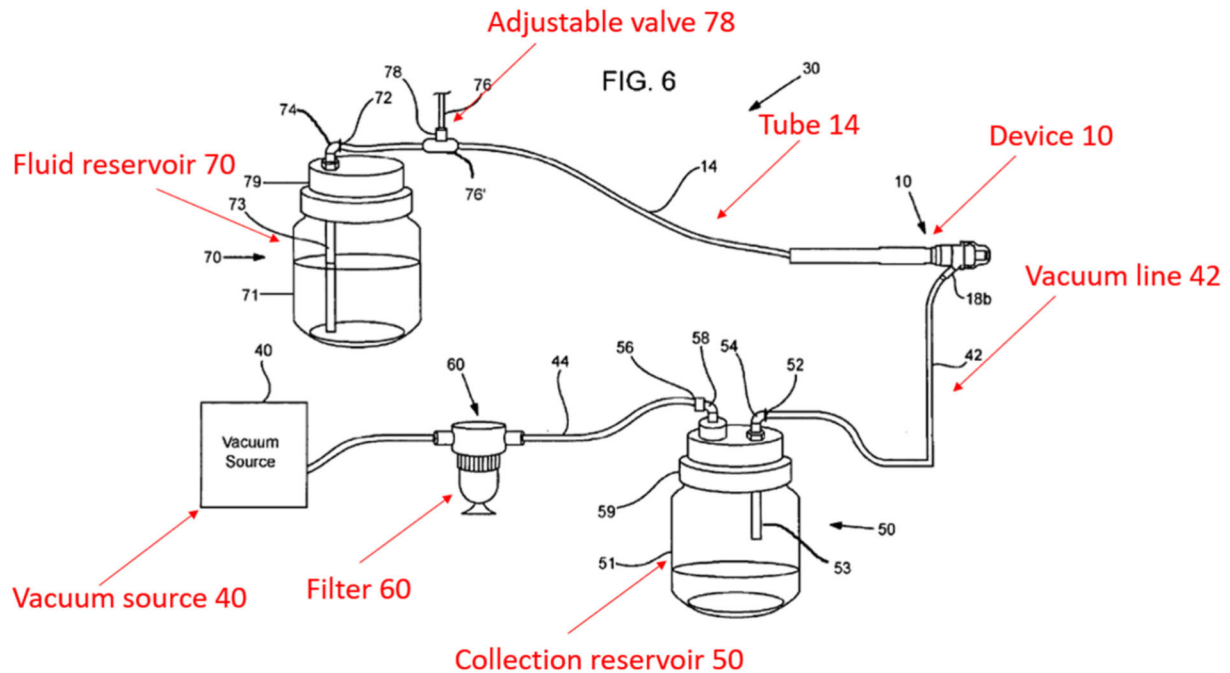
First, the references are directed to skin treatment devices providing a treatment medium via a vacuum base with a chamber and a treatment tip adapted to contact a user. *See, e.g.*, Karasiuk, at Abstract; Greenberg at ¶¶[0003] – [0005]; Palmer at Abstract; Pond at Abstract; Trueba at Abstract; Waldron at 3:20-25. The references are from the same time period and derived from many companies operating in the skin treatment industry.

Second, the prior art provides express motivation for the combinations below. For example, Greenberg remarks that “[i]n some cases the micro-dermabrasion apparatus may need to be modified to accommodate organic particles,” which “may include the dimensions of the tubes, airflow as well as the size of the handle and aperture,” and “the supply and collection [sic] containers may also need to be modified.” Greenberg, ¶[0078]. Palmer also recognizes “it is necessary for the container in which the pressurized solution reservoirs are enclosed to be situated proximate to a source of pressure.” Palmer, 2:37-40. As such, the prior art provides a person of ordinary skill with the explicit motivation to combine the skin treatment devices of the prior art in Exhibits A-D.

1. Karasiuk in view of O’Farrell in view of Garson in view of Danby in view of Waldron in view of Pond in view of Johnson

a) Karasiuk

Karasiuk’s system conducts microdermabrasion procedures using a handpiece that delivers (from fluid reservoir 70) a fluid treatment solution and retrieves the resulting waste/debris (into collection reservoir 50). Karasiuk, Abstract, 5:4-42, 7:65-8:44, FIG. 6.



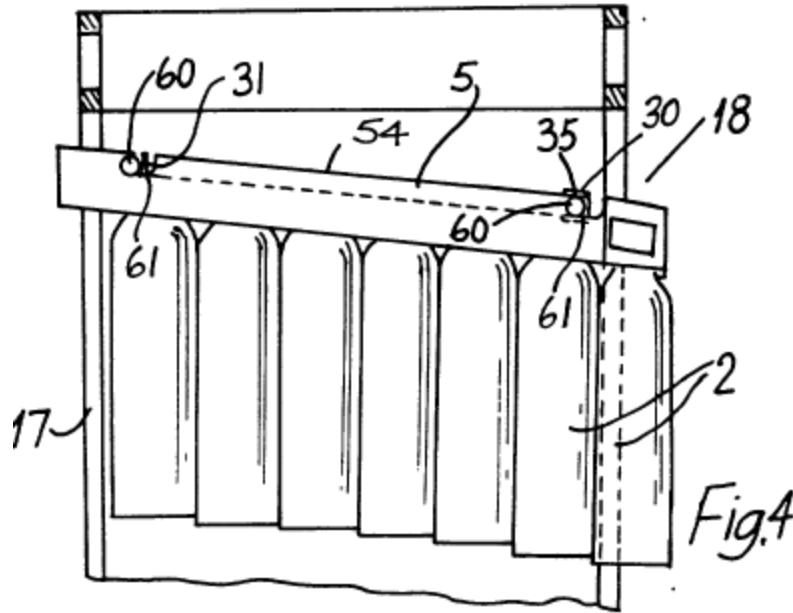
Karasiuk, FIG. 6 (annotated in red).

Karasiuk's system includes handpiece 10 (also referred to as "device 10"), vacuum source 40, and fluid reservoir 70. Karasiuk, 6:52-67. 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. Karasiuk, 7:17-45.

In operation, "the fluid contents in fluid reservoir 70 are drawn through tube 14 and into device 10 where they flow out of the functional block 16 through openings 16d and are applied to the skin." Karasiuk, 7:65-8:22. "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." Karasiuk, 8:31-45.

b) O'Farrell

O'Farrell's system provides a system for displaying and dispensing bottles including a support framework 3, guide means 5, base 10, top 11, front receivers 30, rear receivers 31, brackets 30. O'Farrell, 5:11-14, 22; 6:7-10; Fig. 4.



O'Farrell, Fig. 4

c) **Garson**

Garson's system describes a device including a manifold 30, a conduit 22 to connect a supply 12 to the manifold 30, a valve(s) 32, 34, 36 to control fluid flow through the conduit, a vacuum source (in the form of a vacuum pump 62), a second conduit 54, and a dispensing station 74. *See*, Garson, 3:30-50; 5:19-29. Garson's system utilizes several different fluid sources for intermixing within a mixing chamber.

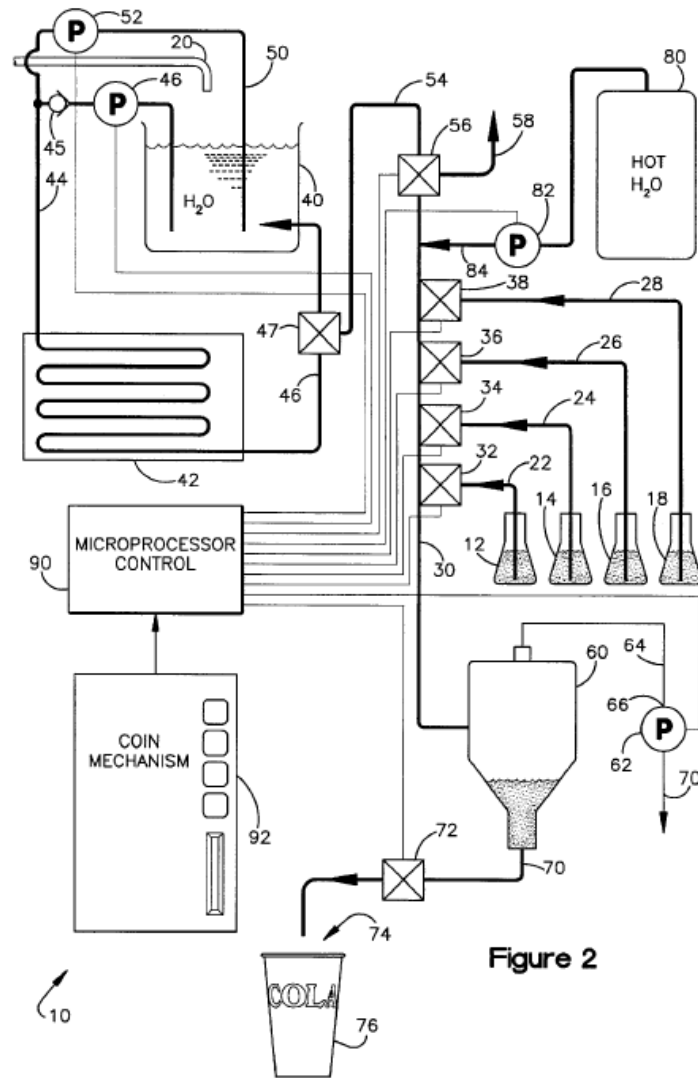
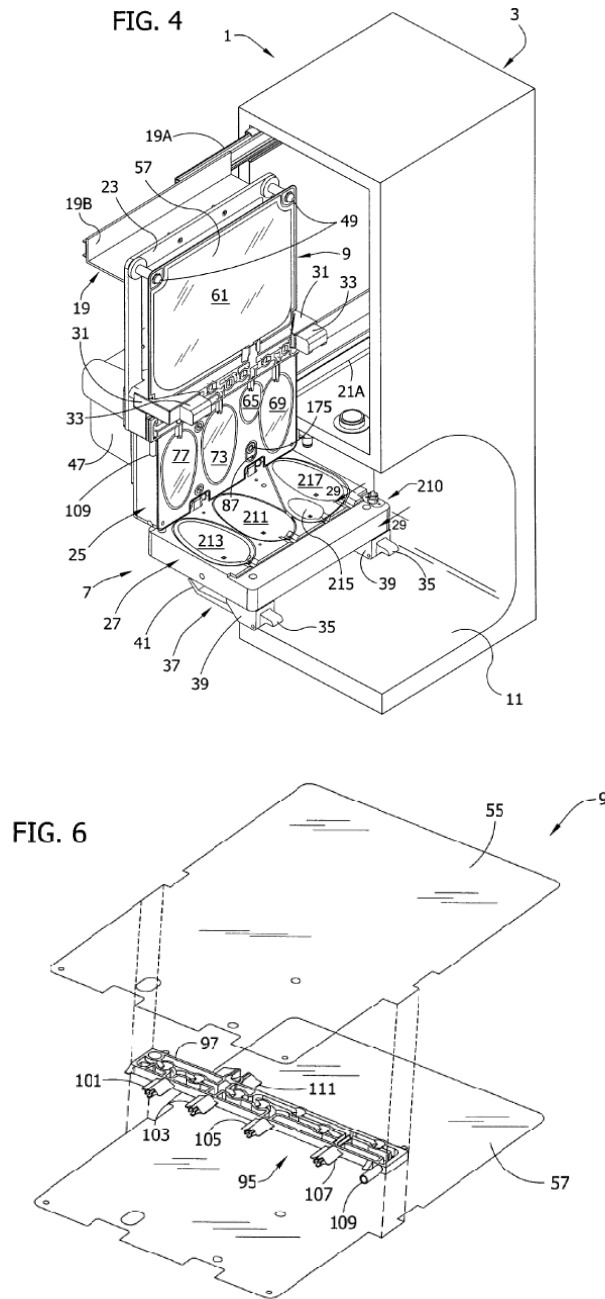


Figure 2

Garson, FIG. 2

d) Danby

Danby's system includes a liquid dispenser including a manifold 95, air pressure operating system (vacuum pressure connector 205), and a valve system to provide liquid from the device. Danby, Abstract.

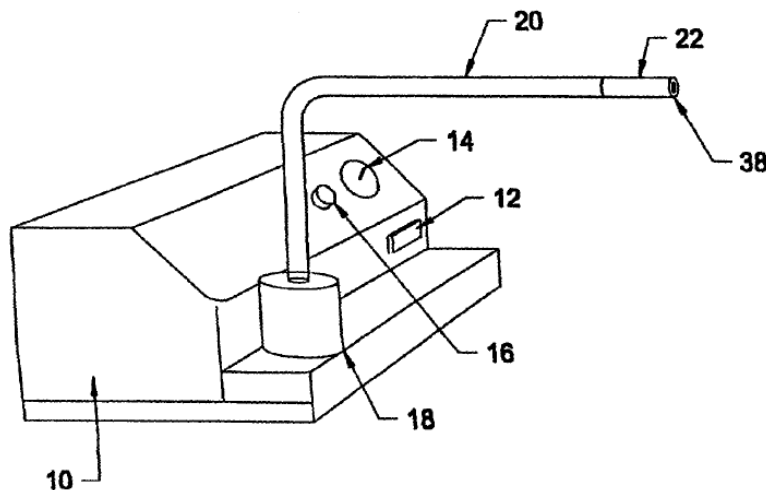


Danby, Fig. 4, 6.

Danby discloses a flow control apparatus that includes a flexible container that includes a plurality of flexible sheets for storing fluid material. The flexible container includes a manifold between a first and second flexible sheet (55, 57) for passing the fluid within the container. The fluid may be provided via a valve. Danby, [0007]-[0009], [0072].

e) Waldron

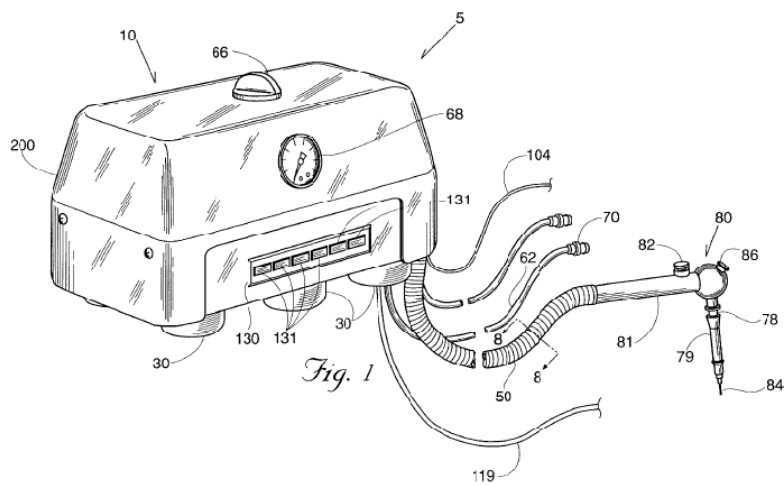
Waldron's system includes a treatment tool and tissue collection system for removing outer layers of skin using an abrasive tipped tool (treatment tip 22) connected to a tube having a vacuum (vacuum pump 24). The abrasive tool contacts the skin and tissue is removed into a collection container. Waldron, Abstract. The handpiece is used to abrade the skin surface and tubing 134 provides fluid for irrigation. Notably, Waldron explains the fluid for irrigation "also acts as a coolant and aids in removing the loosened skin and char particles." Waldron 11:7-8.



Waldron, FIG. 1

f) Pond

In the field of medical devices, Pond's system provides a fluid dispensing assembly that includes a fluid supply system that provides fluid by pressurized air and a handpiece to allow flow between the fluid supply and the patient. Pond, Abstract.



Pond, FIG. 1

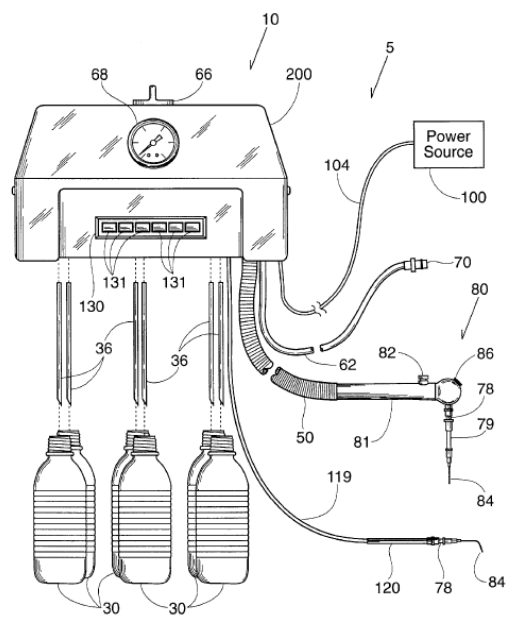


Fig. 2

Pond, FIG. 2

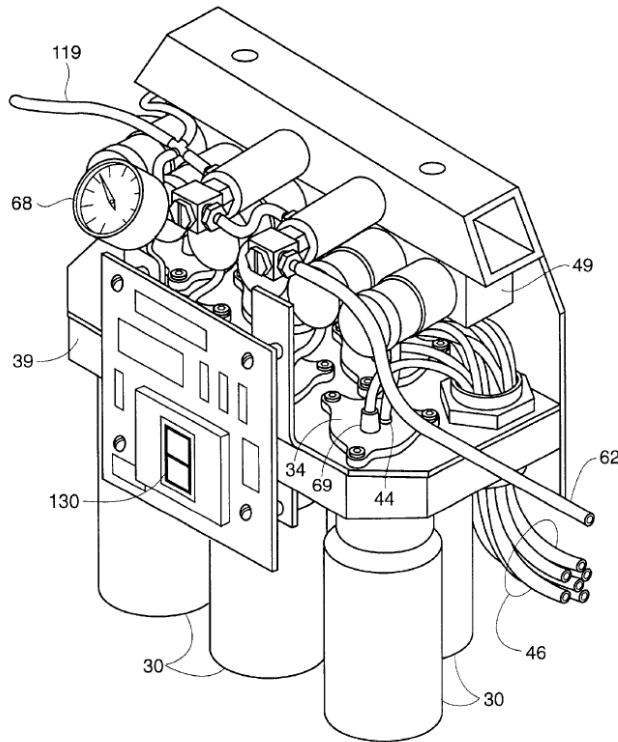


Fig. 13

Pond, FIG. 13

Pond's system includes multiple reservoirs (30) that are capable of containing fluid. The reservoirs (30) are attached to housing 200. The sheath (50) may be detachably coupled to a handpiece (81) and detachably coupled to a fluid reservoir manifold (39). *See*, Pond 7:15-26. Pond's system also includes a light emitting diode display 130, which display utilizes a plurality of individual indicators 131 that indicate the particular fluid selected by the operator. *See* Pond 7:67-8:3.

g) Johnson

Johnson's system includes an apparatus that is operated by selectively releasing water from a water reservoir pressurized with air. A pump cycles water and air into a pressure reservoir and released by a trigger mechanism. The water is released under pressure and channeled through a narrow nozzle to propel the water in a stream pattern. Johnson, Abstract, 1:15-25.

h) Karasiuk-O'Farrell-Garson-Danby-Waldron-Pond-Johnson combination

Karasiuk-O'Farrell: Several reasons would have prompted a POSITA to modify Karasiuk's system based on O'Farrell's teachings. As discussed in Section IV.B.1, Karasiuk's system uses a fluid reservoir and a collection reservoir (two separate reservoirs) for providing treatments to the skin. Based on general knowledge, Karasiuk's disclosure, and O'Farrell's disclosure, a POSITA would have recognized the desirability of a bottle management system that allows the fluid containers of Karasiuk to be stored in an organized fashion. Karasiuk provides that "various changes may be made and equivalents may be substituted without departing from the true spirit and scope of the invention." Karasiuk, [0070]. From this disclosure and POSITA's general knowledge, a POSITA would have been motivated to consider a bottle management system provided by O'Farrell to improve the flexibility and functionality offered by Karasiuk's system.

O'Farrell's bottle management system provides an organized system for displaying multiple bottles using a support framework and a plurality of bottle guide means supported on the framework. O'Farrell, 2:4-15, Fig. 4. A POSITA would have recognized that having the treatment bottles of Karasiuk lined up and organized in an orderly manner as seen in O'Farrell would make the process of switching between bottles (or fluids), more efficient. Having the various treatment fluids in one place allows the operator to switch between different treatments or treatment phases, enhancing the user experience and reducing downtime.

Karasiuk-Garson: A POSITA would have been motivated to combine the technologies of Karasiuk and Garson to provide a hydrodermabrasion system that combines abrasive particles and fluids to improve treatment as well as providing a way to manage and switch between provision of different fluids. Garson's beverage dispensing device provides ample disclosure of how separate

fluids can be stored, mixed, and provided, in a single assembly. By combining Karasiuk's vacuum-based system for treating skin and Garson's vacuum operated fluid mixing system, a POSITA would have produced a system that would improve consistency and control of the flow of liquids used in the skin treatments. Garson's manifold would improve Karasiuk's system in an expected and predictable way to control the type of liquid and amount of liquid being dispensed through the dispensing station (or handpiece). Since both Karasiuk and Garson disclose vacuum-operated systems for controlling fluid flow, a POSITA would have had a reasonable expectation of success in combining the microdermabrasion system of Karasiuk with the fluid delivery system of Garson.

Karasiuk-Danby:

Danby, similar to Garson, provides a liquid dispensing device. Danby's design utilizes a flexible bag in which the fluid is stored and a pressurization technique that provides the liquid to be dispensed at a consistent fluid pressure regardless of the amount of fluid that remains in the flexible bag. Danby, [0002]-[0003], [0009]. Danby also discloses a manifold structure that would make it well suited for applications utilizing a plurality of fluids that is provided via a single channel. A POSITA would recognize that combining Karasiuk and Danby would lead to an improved system that offers precision and reliability in fluid application to result in a predictable delivery and control of fluids.

Karasiuk-Waldron:

Waldron and Karasiuk both provide a skin treatment system that delivers a fluid to exfoliate the skin. They are both directed to skin treatment devices that remove outer layers of skin by a microdermabrasion process. Waldron provides a housing for the components of the skin treatment system and a user interface to adjust the pressurization of the fluid to the handpiece. As both Waldron and Karasiuk are facial treatment devices, a POSITA would have looked to Waldron to

determine the ordinary manner in which facial skin treatment devices are housed. Waldron's console includes a power switch, vacuum pump, pressure gauge, control valve with adjustment knob, electronic control to power the hand piece, a cord to connect the handpiece to the control, a canister for waste, and a container for fluids. Waldron, 10:24-31. Waldron also discloses the use of a controlled vacuum pressure to deliver fluids during treatments, which complements Karasiuk's microdermabrasion system by providing enhanced control over fluid delivery during the skin treatment process, contained in a single housing. Waldron, 5:18-25.

The USPTO provides guidance via the Manual of Patent Examining Procedure that an alleged invention "making portable, integral, separable, adjustable, or continuous" would support a rejection under 35 U.S.C. § 103. MPEP 2144.04(V)(B) (citing *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (A claim to a fluid transporting vehicle was rejected as obvious over a prior art reference which differed from the prior art in claiming a brake drum integral with a clamping means, whereas the brake disc and clamp of the prior art comprise several parts rigidly secured together as a single unit. The court affirmed the rejection holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice.")).

A POSITA would recognize that combining Waldron's device with Karasiuk's system would result in predictable improvements of delivering fluids to human skin during skin treatments in a contained apparatus that incorporates at least the fluid containers, the vacuum source, and the handpiece in a single device. Further, a POSITA would have a reasonable expectation of success in combining the Waldron and Karasiuk systems as both are directed to providing skin treatments via a handpiece with fluid applications.

Karasiuk-Pond:

Pond discloses a multiple solution fluid dispensing system used for dental procedures. While the dental device of Pond and the microdermabrasion system of Karasiuk are distinct in their specific applications, both share similar features within the broader category of medical treatment devices and employ technologies that aid in delivering therapeutic treatments to patients. Pond's system provides multiple fluid reservoirs for dispensing select fluids under pressure. The selected fluids are provided to the user via a handpiece. Both Karasiuk and Pond provide fluid to a user through a handpiece and a POSITA would be motivated to combine the teachings of Karasiuk and Pond to enable switching between multiple treatment fluids or solutions during the use of the device. Pond's multiple fluid control system combined with Karasiuk's device would naturally enhance the treatment process, leading to predictable improvements of usability and efficiency.

Karasiuk-Johnson:

A POSITA would have appreciated Johnson's disclosure of a water dispensing device that utilizes air pressure to propel a liquid through a channel when the pressure is released by a trigger. Johnson, Abstract, 1:18-25. A POSITA would be motivated to combine Johnson's pressurized fluid control system with Karasiuk's microdermabrasion device to enhance the handling of abrasive fluids. The trigger-release valve in Johnson would offer improved fluid pressure control, allowing for more precise application of the abrasive fluids in Karasiuk's system. A POSITA would have had a reasonable expectation of success, as both systems rely on controlled fluid pressure to achieve their respective functions, making them compatible and likely to result in a more efficient and effective skin treatment system.

With this motivation and knowledge, a POSITA would have investigated other references discussed herein to achieve benefits that allow for a seamless, efficient, hygienic, and comfortable

treatment process. The combination of Karasiuk and any of the references discussed herein would be obvious to a POSITA to improve the usability of Karasiuk's device.

It's further noted that bottles or fluid containers can be connected together in various ways including, but not limited to:



a multi chamber IV bag;



a multi-tank inkjet printer;



a wine dispenser; and



a soap dispenser.

Therefore, A POSITA would have easily recognized the desirability of having multiple containers configured for providing different treatment solutions when performing a skin treatment service and combined the teachings available by at least the prior art references cited herein. For decades before the filing of the '287 Patent, people have performed skin care treatments that include several “steps” or types of treatments. For example, a common skincare regimen may

include: (1) cleansing the skin with a cleanser, (2) toning the skin with a toner or lotion, (3) applying a serum, (4) moisturizing with a moisturizer or oil. It is well known that people apply several different fluids to the skin in order to cleanse, exfoliate, moisturize, or otherwise treat skin. A POSITA would have easily appreciated the advantages of combining the teachings of the cited prior art references as well as general knowledge and common sense in arriving at the technology claimed in the '287 Patent.

(1) Claim 1

[1.pre]

Karasiuk teaches a system for treating skin. Karasiuk, Abstract, 2:20-42, FIG. 6.

[1.1]

Karasiuk teaches that different fluids are appropriate for different types of skin treatments. For example, fluids of differing viscosities. Karasiuk, 7:17-45. Garson teaches a multiple-fluid container system with a plurality of fluid containers. Garson, FIG. 1. Waldron's microdermabrasion device includes a console, to which various controls and apparatuses are affixed. Waldron, Fig. 1. A POSITA would have been motivated to combine Karasiuk's disclosure of multiple fluids for skin treatments and Garson's system for housing multiple fluid containers as an obvious improvement to the Karasiuk system. The combination would create a device with a user-friendly interface that includes the treatment receptacles in a single housing.

[1.2]

Karasiuk teaches a handpiece assembly with a skin contact surface. Karasiuk, 5:4-19, FIG. 6.

[1.3]

To the extent that Cartessa can understand the term "block", Cartessa provide that O'Farrell's bottle guide means 5 provides a structure for which fluid containers are attached.

O'Farrell, FIG. 4. Additionally, Johnson teaches a "one-way valve that is normally biased in a closed position. The one-way valve that is shown in FIG. 2 consists of a ball 30 that is biased against an elastomeric seal 11 by a spring 13. As a vacuum is created by the piston 33, the force of the spring 13 is overcome and the ball 30 drops away from the elastomeric seal 11, allowing water 69 or air 35 to pass." *See* Johnson 5:19-26. Both O'Farrell and Johnson provide structures within a device that (a) provides a means to which containers are affixed (O'Farrell) and (b) acts as a valve to allow/disallow fluid to pass through (Johnson).

[1.3a]

Garson teaches selectively receiving a fluid from a first container through actuation of valves associated with containers. Garson, 4:20-56, Fig. 4.

[1.3b]

Similar to [1.3a], Garson teaches selectively receiving a fluid from a second container through actuation of valves associated with containers. *See* [1.3b], Garson, 4:20-56, FIG. 4.

[1.3c]

Karasiuk teaches a supply conduit 14 between the fluid source and the handpiece assembly 10. Karasiuk, FIG. 6. Garson or Garson in view of Danby teaches that a first conduit can connect with a console. Garson, 4:36-56, Danby claim 61. Karasiuk's handpiece would have been obvious to be combined with Garson and/or Danby's teaching of a conduit to connect with a console. Further, Waldron teaches a system that includes a console (housing 10), first conduit (hollow tube or wand assembly 20) and handpiece (treatment tip 22). Waldron, 5:18-25.

[1.4]

Karasiuk teaches a vacuum source (item 40). Karasiuk, Fig. 6. Garson or Garson in view of Danby teach that the console can comprise a vacuum. Garson, 2:20-36, Danby, [0007], [0019].

Further, Waldron also teaches that the console can comprise the vacuum, with the vacuum being located within the housing. Waldron, 5:18-25.

[1.5]

Karasiuk teaches a waste conduit 42 in fluid communication with the handpiece assembly. The handpiece is in fluid communication with the vacuum source through container 50, line 44, and filter 60. *See* [1.2], Karasiuk, FIG. 6.

[1.6]

With respect to the handpiece, the first container, the at least one additional container, and waste container being connected to the console, Karasiuk in view of Garson teaches this limitation. *See* [1.2], [1.3a], [1.3b]. Garson teaches that the first container may contain a first treatment fluid, and the at least one additional container contains an additional treatment fluid. Garson 2:37-59, 3:11-29.

[1.7]

Karasiuk teaches a handpiece in fluid communication with the vacuum source and the waste container through a second conduit. *See* [1.5], Karasiuk, FIG. 6.

[1.8]

Garson teaches delivery of first treatment fluid and the additional treatment fluid to the handpiece sequentially. Garson, 5:1-18, 53-67, FIG. 1.

(2) Independent claims 11, 22, 26, 37

[11pre], [22pre], [26pre], [37pre]

See [1pre].

[11a], [22a], [26a], [37a]

See [1.1].

[11b], [22c], [26b], [37b]

See [1.2].

[22b]

Collection lumen

[26c], [37c]

See [1.3]

[11c], [26d], [37e]

See [1.3a], [1.3b], [1.3c], [1.4].

[11e], [22d], [26e], [37f]

See [1.5], [1.7].

[11f], [22f], [26f], [37g]

See [1.8].

(3) Claims 2, 4, 5, 9, 10, 12, 17, 18, 24, 25, 30, 31, 35, 36, and 40-42

Claim 2: Garson teaches at least three containers. Garson, FIG. 1.

Claim 4: Garson teaches a computing device (microprocessor control 90) for controlling functions of the system. Garson 5:44-67, FIG. 1.

Claim 5: Garson teaches the user of a user input device as a control panel in selecting the appropriate fluid container. Garson, 6:4-17.

Claim 9: Garson teaches flow through the connection between the bottles and the valved system. Garson teaches control of the fluid via valves, e.g., solenoid valves 32, 34, 36, 38. Garson, FIG. 3.

Claim 10: Garson teaches energizing solenoids sequentially to draw fluids from each of the plurality of containers at different times such that the fluids from each container do not mix. Garson, 5:1-17, FIG. 1.

Claim 12: *See* [1.8], claim 10.

Claim 17: *See* claim 4.

Claim 18: *See* claims 4 and 17.

Claim 24: *See* claims 4, 17, and 18.

Claim 25: *See* claim 5.

Claim 30: *See* claims 4, 17, and 24.

Claim 31: *See* claims 5, 18, and 25.

Claim 35: *See*, [1.8], claims 8-10, and [26f].

Claim 36: *See*, [1.8], claims 8-10, 35, and [26f].

Claim 40: *See*, [1.8], claims 8-10, 35, 36, and [26f].

Claim 41: *See* claims 4, 17, 24, and 30.

Claim 42: *See* claims 5, 18, 25, and 31.

(4) Claims 3 and 29 (Karasiuk and Garson)

Claim 3: Karasiuk teaches the system configured to deliver the fluid to the handpiece. Karasiuk teaches a supply conduit 14 between the fluid source and the handpiece assembly 10. Garson teaches a fluid dispensing system having at least three containers for fluid and a solenoid system to allow for delivery of fluid one at a time. Garson teaches energizing solenoids sequentially to draw fluids from each of the containers sequentially such that the fluids from each container do not mix. Garson, 5:1-18. A POSITA would have been motivated to combine Karasiuk's assembly with Garson's to provide the added benefit of having multiple options (treatment fluids) to select from.

Claim 29: *See* [1.8], claim 10, claim 12, [22f], claim 23, and claim 40.

(5) Claims 6, 7, 19, 20, 32, 33, 43, 44 (Pond)

Touchscreens and displays were both well known for their use with multiple-option devices to allow selection of different options of fluids within a housing, as disclosed by Pond. Pond, 2:1-21, 9:37-50, FIG. 11.

(6) Claims 8, 45 (Garson and O'Farrell)

Garson teaches controlling fluid transmission using valves such as solenoid valves. Garson, 3:52-53. FIG. 3. A POSITA would have looked to O'Farrell or Waldron to provide the console in which the valves are housed.

(7) Claims 14, 23, 28 (Karasiuk, Garson, Danby, Waldron)

Claim 14: Karasiuk teaches a vacuum source, identified as item 40. Karasiuk, FIG. 6. Garson or Garson in view of Danby teach that the console can comprise the vacuum. Waldron also teaches that the console can comprise the vacuum within the housing. Waldron, 5:18-25.

Claim 23: Karasiuk in view of Garson in view of Danby or Karasiuk in view of Waldron teach a console comprising a vacuum source. *See* claim 14. Karasiuk also discloses a waste conduit 42 in fluid communication with the handpiece assembly. Karasiuk, FIG. 6. Garson teaches energizing solenoids sequentially to draw fluids from each of the containers. Garson, 5:1-17. A POSITA would have found it an obvious design improvement to combine Karasiuk's apparatus with Danby's apparatus to allow multiple treatment fluids. A POSITA would have similarly been motivated to combine the Karasiuk-Danby apparatus with Garson to provide each treatment fluid without having each fluid intermix or become contaminated.

Claim 28: Karasiuk in view of Garson in view of Danby or Karasiuk in view of Waldron teach a console comprising a vacuum source. *See* claim 14, 23. Karasiuk further discloses a waste conduit 42 in fluid communication with the handpiece assembly. The handpiece assembly is in fluid communication with the vacuum source through container 50 and line 44. Karasiuk, FIG. 6.

(8) Claims 15, 16 (Karasiuk)

Claim 15: Karasiuk teaches delivery of a single treatment material from the first container to the handpiece at the user's skin. Karasiuk teaches a supply conduit 14 between the fluid source and the handpiece assembly 10. Karasiuk, FIG. 6.

Claim 16: Karasiuk teaches that different fluids are appropriate for different skin treatments, e.g., fluids of different viscosities. Specifically, Karasiuk states “This feature not only allows the amount of vacuum to be adjusted for a given fluid, but allows fluids having different viscosities to be applied at the same vacuum level.” See Karasiuk, 7:17-45.

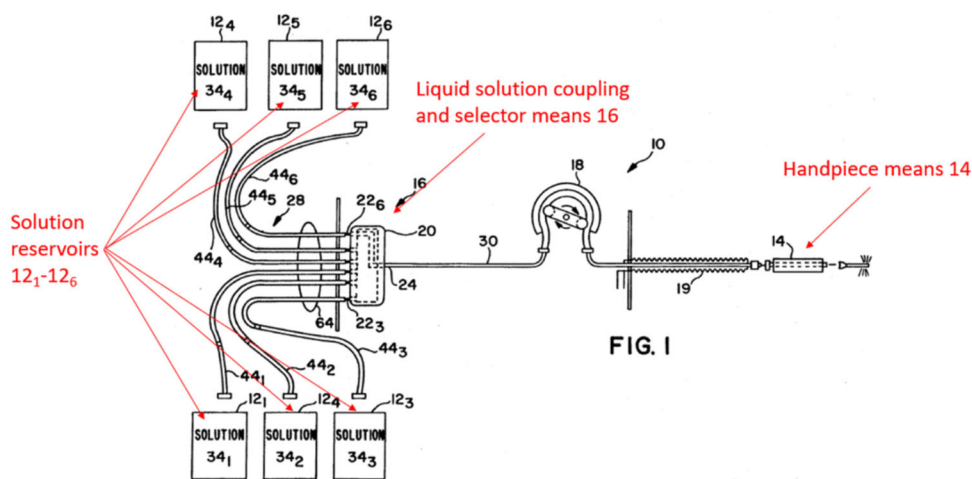
2. Karasiuk in view of Palmer

a) Karasiuk

See §IV(B)(1).

b) Palmer

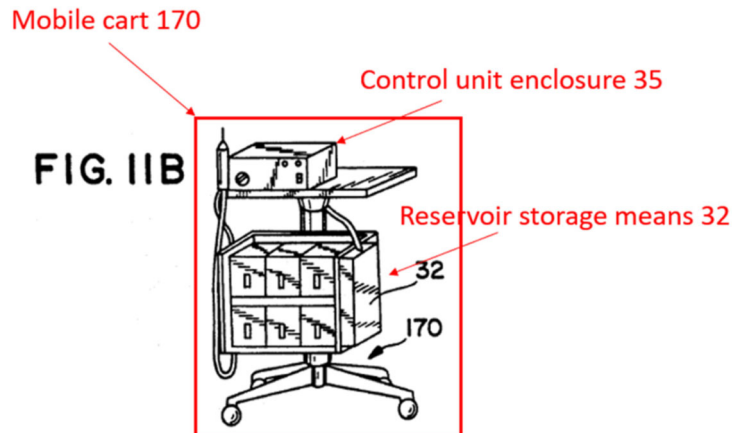
Palmer discloses a medical device system for delivering a selected fluid treatment solution to an application site through a handpiece. Palmer, Abstract, 4:50-68, FIG. 1.



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. Palmer, Abstract, 4:50-68.

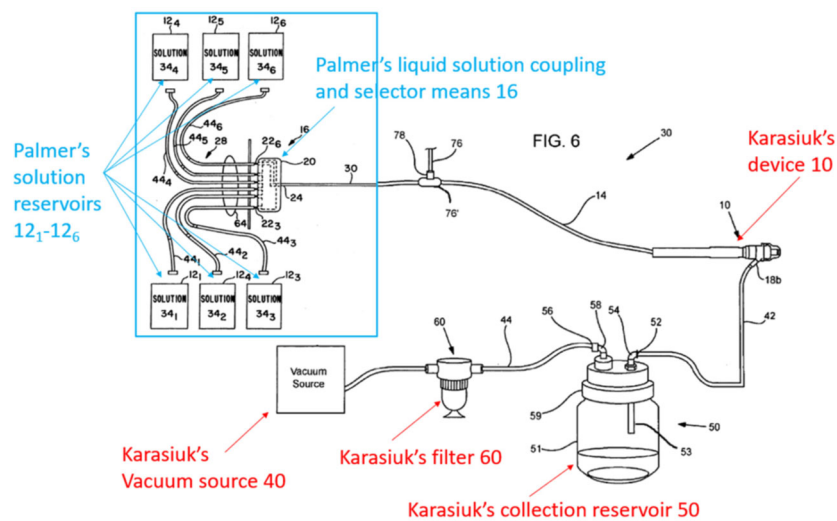
As shown in FIG. 11B, Palmer's "mobile cart 170" receives control unit enclosure 35 and "reservoir storage means 32 in the form of modular single-shelf racks" for increased portability and/or organization. Palmer, 9:58-10:16.



Palmer, FIG. 11B (annotated in red).

c) 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.



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. Karasiuk, 2:66-3:3, 6:57-67; 8:6-44. 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. Karasiuk, *Id.* 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. 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." Palmer, 9:63-10:2, FIGS. 11A-11C. Indeed, such a modular configuration for medical devices was well-known before the Priority Date. Several reasons would have prompted a POSITA to modify Karasiuk's system based on Palmer's teachings. As discussed in §IV.B.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. Karasiuk, Abstract, 5:4-42; 6:2-7:45; 7:65-8:44, FIG. 6. Based on general knowledge and Karasiuk's disclosure, a POSITA would have recognized the desirability of using multiple types of treatment solutions during microdermabrasion. Karasiuk, 3:24-28 ("other solutions or compounds offering various benefit(s)."), 5:56-58 ("application of lotions/vitamins or other fluids"). 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." Karasiuk, 9:6-10. 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. *In re Harza*, 274 F.2d 669, 671 (CCPA 1960) (mere duplication of parts carries no patentable significance). Fluid delivery techniques required to use multiple containers with Karasiuk's handpiece would have been well known and part of a POSITA's general knowledge. With this motivation and knowledge, a POSITA would have investigated other references such as Palmer to achieve benefits offered by multiple treatment solutions. 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. Palmer, 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." Palmer, 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. Palmer, Abstract, 2:48-4:2, cl.1, FIG. 1.

Second, the combination would enable sequential delivery of different treatment solutions. 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." Palmer, 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.

Fourth, a POSITA would have been motivated to adopt Palmer's modular design to provide added flexibility, organization, and portability. Palmer, 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 32 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)." Palmer, 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.

A POSITA would have had a reasonable expectation of success in such a combination. Both Karasiuk and Palmer are directed to medical devices that deliver treatment solutions to treatment sites via a handpiece. Karasiuk, Abstract, 2:21-42, FIG. 6; Palmer, Abstract, 1:10-15, FIG. 1; Greenberg, [0003]; '287 Patent, 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." Palmer, 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). Fluid delivery systems and techniques were largely compatible and were used interchangeably across various applications without undue experimentation. 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. This replacement would also reflect the use of a known technique to improve similar devices in the same way.

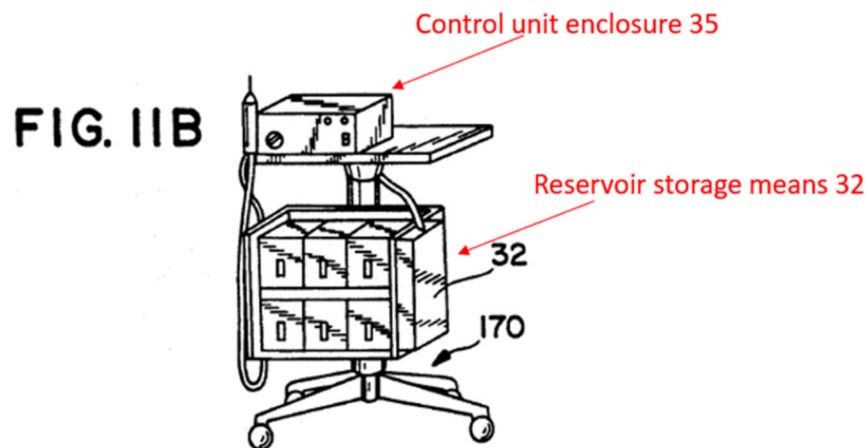
(1) Claim 1

[1pre]

To the extent the preamble is limiting, Karasiuk describes “microdermabrasion device, microdermabrasion system employing the device.” Karasiuk, 2:21-23, Abstract, FIG. 6.

[1.1]

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. Palmer, 9:58-10:2, FIGS. 11A-11C.



Palmer, FIG. 11B (annotated).

This aligns with the '287 patent's disclosure of console that receives multiple containers, valve system, handpiece, vacuum pump, and waste container, and is placed on four casters for “easy movement.” '287 Patent, 14:38-48, 9:18-20, 18:38-55, 11:5-6, 6:6-14, 7:47-48. 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. Using a console to

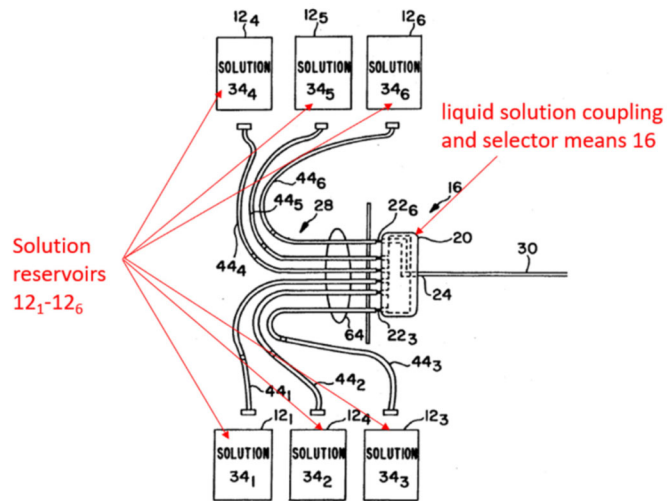
house similar medical devices was well-known and would have been within a POSITA's general knowledge. A POSITA would have had a reasonable expectation of success in placing Karasiuk-Palmer's components in a console, as it would constitute the use of a known technique to improve similar devices in the same way. *Id.* Again, Karasiuk-Palmer describes six solution reservoirs in the modular structure (*console*), which would have been understood as *first and at least one additional containers* received at the console.

[1.2]

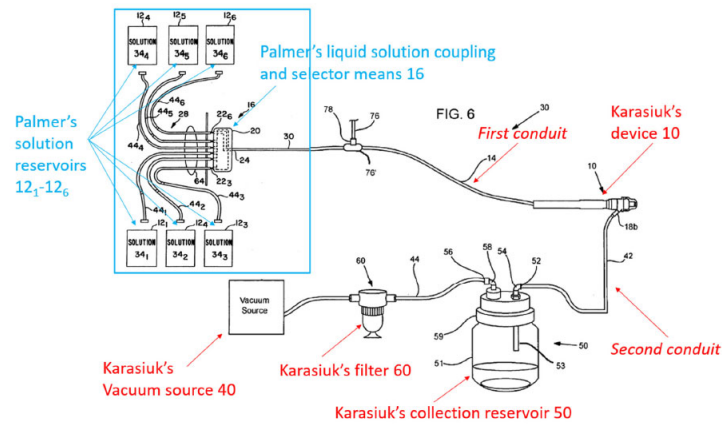
Karasiuk-Palmer includes a handpiece configured to contact skin tissue of a subject, such as Karasiuk's "[d]evice 10" (FIG. 6) designed to be "**handheld by a user** for its application to the skin of a patient." Karasiuk, 5:4-6:5, 7:65-8:5. Similarly, Palmer describes "handpiece means 14" (FIG. 1) for "delivering a selected one of the liquid solutions contained in one of the reservoirs 12 directly to a treatment site." Palmer, 4:57-60.

[1.3], [1.3a], [1.3b]

As discussed in [1.1], Karasiuk-Palmer's solution reservoirs (first and at least one additional containers) and device 10 (handpiece) are connected to its modular structure (e.g., "mobile cart 170") (console). Karasiuk-Palmer describes a block based on Palmer's teaching of "liquid solution coupling and selector means 16" that is included in the control unit enclosure 35 and configured for coupling handpiece means 14 to a selected one of the liquid solutions in a respective solution reservoir 12. Palmer, 4:60-63, 5:1-14. As shown in Palmer's FIG. 1 and Modified Karasiuk's FIG. 6, Palmer's "liquid solution coupling and selector means 16 include[s] selector valve means 20 having a plurality of inputs 22, an output 24, and means for coupling a selected one of the inputs 22 to the output 24." Palmer, 5:1-9.



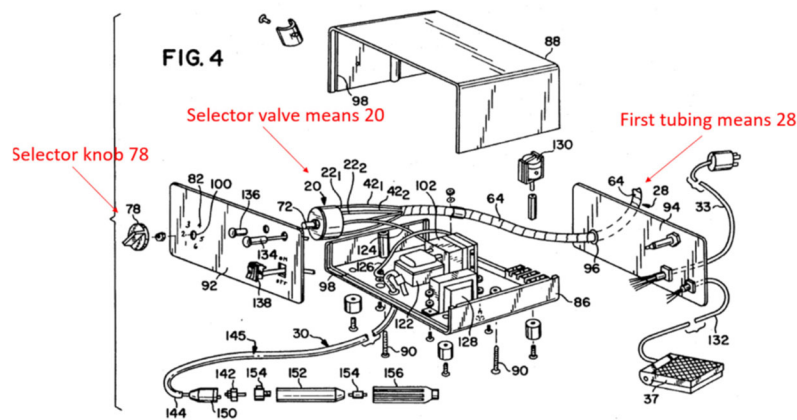
Palmer, FIG. 1 (annotated)



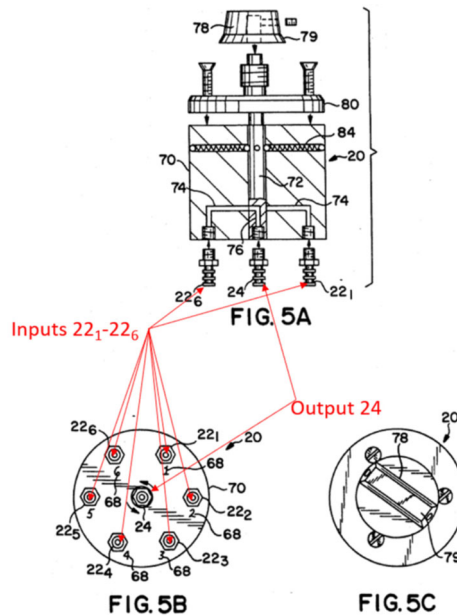
Palmer and Karasiuk, Modified FIG. 6.

Therefore, a POSITA would have understood and found obvious that (1) Palmer's selector valve 20, (2) Palmer's liquid solution coupling and selector means 16 (including the valve 20), or (3) Palmer's control unit enclosure 35 (housing the coupling and selector means 16) correspond to, and perform the operations of, the **block**. These components are (1) configured to selectively receive fluid from the first container (e.g., Palmer's reservoir 121) when the first container is connected to the console, (2) configured to selectively receive fluid from the at least one additional container (e.g., Palmer's reservoir 122) when the at least one additional container is connected to

the console, and (3) configured to selectively be in fluid communication with the handpiece (e.g., Karasiuk's device 10) through a first conduit (e.g., Karasiuk's tube 14 or collectively Palmer's second tubing means 30, Karasiuk's T joint 76', and Karasiuk's tube 14) when the handpiece is connected to the console (e.g., Palmer's mobile cart 170). *Id.*; Palmer, 5:1-18. Additionally, Karasiuk-Palmer describes "manifold," which the '287 patent allegedly describes as corresponding to the **block**. '287 Patent, 5:28-30. For example, Palmer's FIG. 4 shows an exploded view of control unit enclosure 35 including first tubing means 28, **selector valve means 20** (connected via valve inputs 221-226 to solution reservoirs 121-126), and selector knob 78. Palmer, 8: 22-9:16, FIG. 4.



Palmer illustrates an exemplary selector valve means 20 in FIGS. 5A-5C.



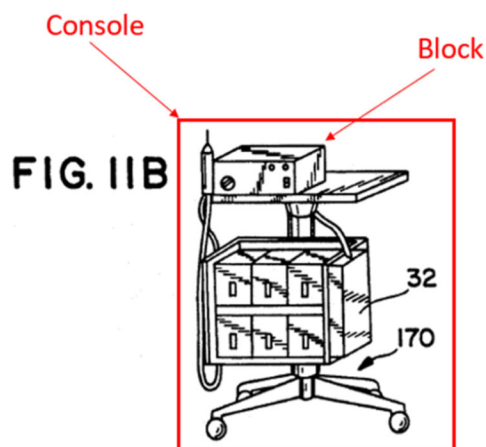
Palmer, FIGs. 5A-5C (annotated in red).

Referring to FIGS. 5A-5B, selector valve means 20 includes main body 70 defining multiple “liquid inlet passages 74” with multiple “input port[s] 22” and “liquid outlet passage 76” with “selector valve output port 24.” Palmer, 8:6-21. Further, main body 70 defines a “bore which receives the rotatable core 72 in a plane common with the inner ends of the other inlet passages 74.” *Id.* The “liquid outlet passage 76 is formed in the rotatable core 72 having one end opening into the selector valve output port 24 and another end opening onto the cylindrical core surface in the plane of the inner ends of passages 74.” *Id.* This structure corresponds to the “manifold” described in the ’287 patent.

Alternatively, to the extent Complainant argues that the **block** requires a manifold and that Karasiuk-Palmer does not disclose it, a POSITA would have found it obvious to use a manifold to implement Palmer’s functionality of switching treatment fluids. Indeed, manifolds were well known devices for selecting between different fluids and would have been within a POSITA’s general knowledge. Indeed, a POSITA would have viewed a manifold as one of a finite number of options to achieve the functionality described by Palmer that would have been obvious to try.

Id. A POSITA would have had a reasonable expectation of success in implementing Palmer's switching between different fluids and providing a single fluid output using a manifold as it would have merely involved a simple substitution of one well-known element for another to obtain predictable results. *Id.*

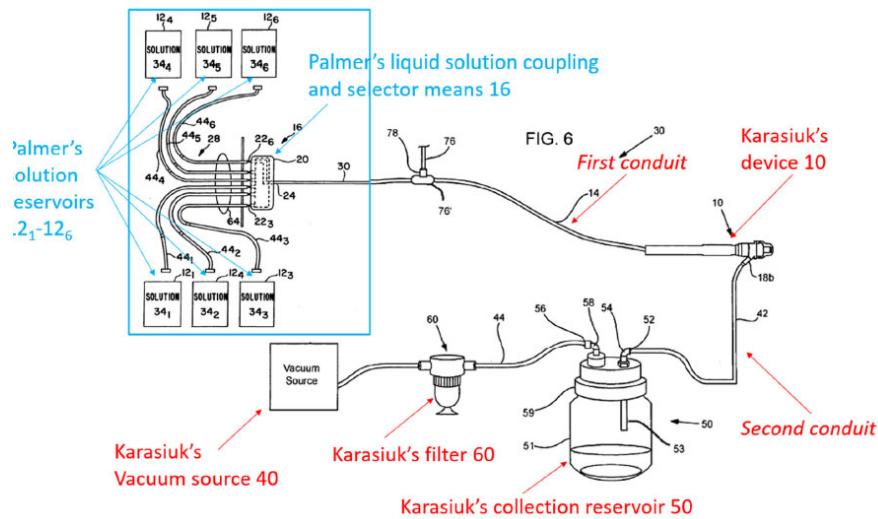
Lastly, Palmer's control unit enclosure 35 (**block**), which includes the coupling and selector means 16 having the valve 20, is included in "mobile cart 170" (**console**). Palmer, 9:58-10:16, 4:53-5:14, 8:22-9:16, FIG. 11B. Further, a POSITA would have found obvious that Karasiuk's device 10 (**handpiece**) is connected to "mobile cart 170" (**console**), as illustrated in Palmer. Palmer, FIG. 11B.



Palmer, FIG. 11B.

[1.4]

As discussed in §IV.C.2, the Karasiuk-Palmer system uses Karasiuk’s “vacuum source 40” to pump the treatment fluids and remove waste/debris as intended in Karasiuk. Karasiuk, 6:52-67.

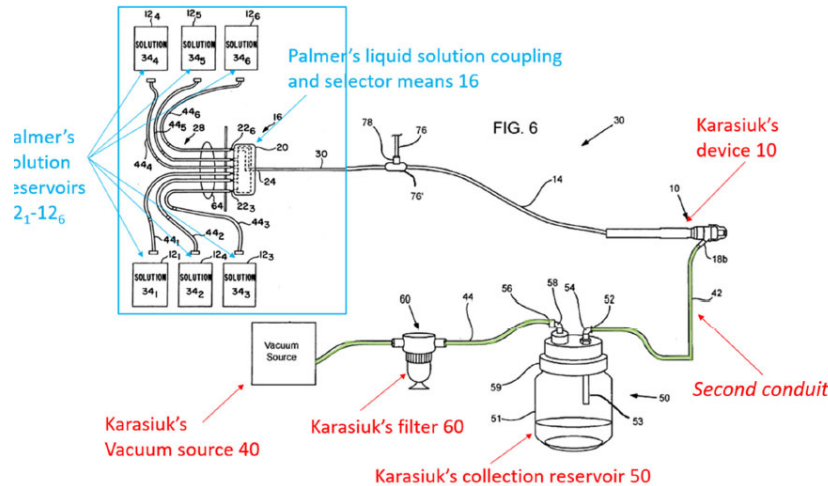


Palmer and Karasiuk, modified FIG. 1 and FIG. 6.

As discussed in §IV.C, a POSITA would have been motivated and found it obvious to include the vacuum source in the console (e.g., Palmer’s mobile cart 170) for known benefits.

[1.5]

In Karasiuk-Palmer, Karasiuk’s handpiece includes “[v]acuum opening 18b” in fluid communication with “vacuum source 40” through the “vacuum line between device 10 and vacuum source 40” (e.g., collectively vacuum line 42, second vacuum line 44, vacuum line 46) (respectively or collectively a second conduit) when the handpiece is connected to Palmer’s “liquid solution coupling and selector means 16” arranged at “mobile cart 170” (console; see [1.1]). Karasiuk, 6:52-67, FIG. 6; Palmer, 4:50-68, 9:58-10:2, FIGS. 1, 11B.



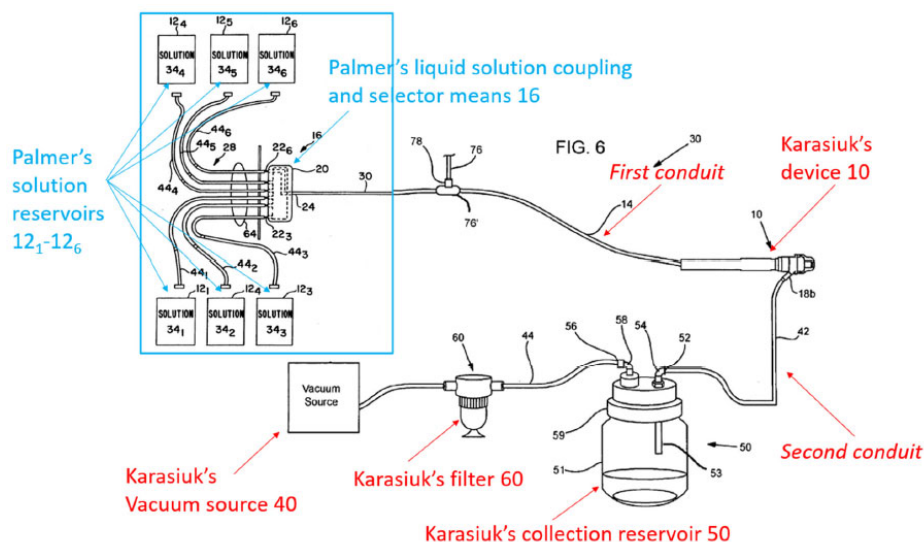
Palmer and Karasiuk, modified FIG. 1 and FIG. 6.

As discussed in [1.3], [1.3a], [1.3b], Karasiuk's *handpiece* is connected to the *console* ([1.1]). As discussed in [1.4], Karasiuk's "vacuum source 40" is used to pump treatment fluids and remove waste/debris. As shown in Karasiuk's modified FIG. 6, a POSITA would have understood and found obvious that Karasiuk's "vacuum source 40" is fluidly connected to Karasiuk's collection reservoir 50, which is *in fluid communication with* Karasiuk's vacuum source 40. *Id.*

[1.6]

As discussed in §IV.C.2, Karasiuk-Palmer replaces Karasiuk's reservoir 70 with Palmer's multiple reservoirs and "liquid solution coupling and selector means 16" to thereby allow selection of different treatment solutions. As discussed in [1.3], [1.3a], and [1.3b], Karasiuk's handpiece and Palmer's reservoirs (*first and at least one additional containers*) are each connected to

Palmer's "liquid solution coupling and selector means 16" arranged at "mobile cart 170" (*console*; see *supra* [1.1]).



Palmer and Karasiuk, modified FIG. 1 and FIG. 6

As discussed in [1.5], Karasiuk describes "collection reservoir 50" (including "reservoir 51") (*waste container*) for receiving "waste materials (abraded skin particles, and optionally, fluids)" "removed through the microdermabrasion process." Karasiuk, 6:52-67, 8:6-44. As shown in FIG. 6, "reservoir 51" is connected to "opening or port 18b" of the handpiece via "vacuum line 42," and the handpiece is connected to Palmer's "liquid solution coupling and selector means 16" (part of the *console*; *supra* [1.1]) via "tube 14." Karasiuk, 6:52-67. Thus, Karasiuk's reservoir 51 (*waste container*) is connected to the *console*. Further, in the resulting system, Karasiuk's collection reservoir would have been placed in Palmer's modular structure (e.g., "mobile cart") for similar reasons discussed in §IV.B.1. *Id.* Also, Palmer's reservoirs each include "a respective liquid solution" with a unique color coding. Palmer, 4:53-57, 5:37-6:32. Karasiuk also recognizes the desirability of using multiple types of skin treatment solutions during microdermabrasion. Karasiuk, 3:24-28, 5:3-6:5. In Karasiuk-Palmer, it would have been obvious to use Palmer's multiple containers to hold different treatment fluids as taught by Karasiuk and Palmer—for

example, a first container holding an antioxidant formulation and a second container holding a hydrating formulation.

[1.7]

As discussed in [1.5]-[1.6], Karasiuk's handpiece is in fluid communication with "vacuum source 40" through a vacuum line (e.g., collectively vacuum line 42, second vacuum line 44, vacuum line 46) (respectively or collectively *second conduit*). Karasiuk, 6:52-67, FIG. 6. Further, Karasiuk's "collection reservoir 50" (*waste container*) is "connected in the vacuum line between [handpiece] 10 and vacuum source 40." Karasiuk, 6:57-58, 6:52-7:8.

[1.8]

As discussed in §IV.C.2, Karasiuk-Palmer includes "**a selector valve** for fluidly coupling the handpiece to a selected one of the liquid solutions" contained in "a plurality of solution reservoirs 12," as taught by Palmer. Palmer, Abstract, 4:50-63, 8:6-21, FIGS. 1, 5A-5C. As discussed in [1.6], the reservoirs in the combination (*first and at least one additional containers*) contain different solutions (*first and additional treatment fluids*). Palmer, 4:50-6. 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.**" Palmer, 6:46-51, 11:9-12 (emphasis added). Karasiuk recognizes desirability of using multiple types of skin treatment solutions during microdermabrasion. Karasiuk, 3:24-28, 5:3-6:5. 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).

(2) Claim 2

The Karasiuk-Palmer system would have included at least three containers (e.g., six) received in the console (e.g., mobile cart 170), as taught by Palmer. Palmer, 4:53-63 (“a plurality of solution reservoirs 12 (six shown)”), 6:66-7:2. Palmer’s multiple solution reservoirs would have been understood as a *first container* and *at least one additional container* having *second and third containers*. In Karasiuk-Palmer, it would have been obvious to use Palmer’s multiple containers to hold different treatment fluids as taught by Palmer and Karasiuk—for example, a first container holding an antioxidant formulation, a second container holding a hydrating formulation, and a third container holding a sunscreen.

(3) Claim 3

As discussed in §IV.C.2 and at [1.5], [1.6], [1.8] and claim 2, Karasiuk-Palmer includes at least three containers that contain different fluids and are connected to the console. Further, as Palmer describes, the resulting system operates to connect the handpiece to a selected container one at a time so that “a patient may be treated with two **or more solutions** during the same procedure, **one after the other.**” Palmer, 11:9-12, 6:46-51 (emphasis added).

In Karasiuk-Palmer, it would have been obvious to use Palmer’s three containers to deliver to the handpiece one at a time different treatment solutions as taught by Palmer and Karasiuk—for example, a first container holding an antioxidant formulation, a second container holding a hydrating formulation, and a third container holding a sunscreen.

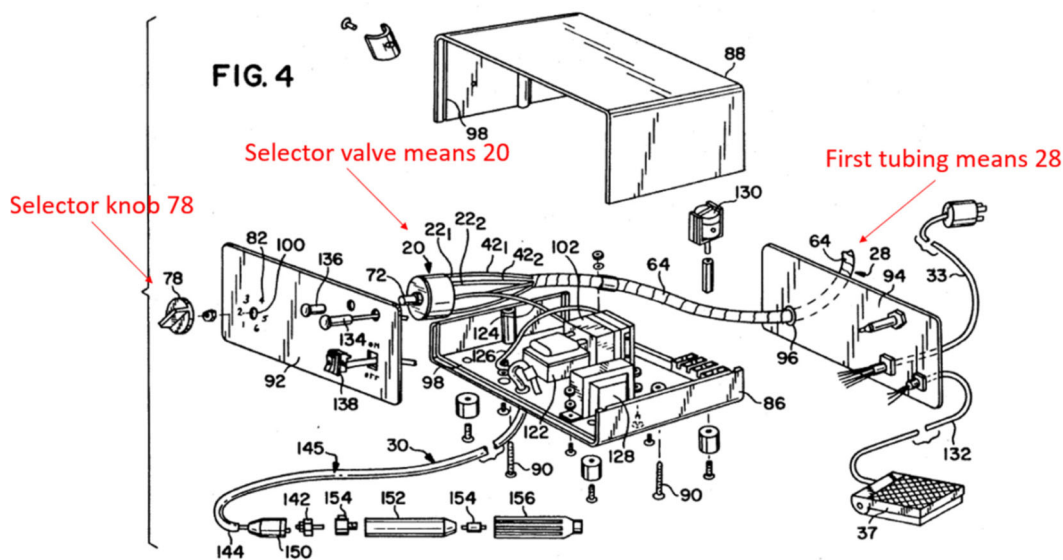
(4) Claim 8

See [1.1], [1.3], [1.3a], [1.3b], and [1.8] as to the first container and the at least one additional container being connected to the console.

See [1.6] as to the first and at least one additional containers) containing the first and additional treatment fluids. Palmer, 4:50-63.

As discussed in [1.3], [1.3a], and [1.3b], Palmer's selector valve means 20, Palmer's liquid solution coupling and selector means 16, and/or Palmer's control unit enclosure 35 constitutes the block in the resulting system.

As discussed in [1.3], [1.3a], [1.3b], and [1.8], Karasiuk-Palmer's block (e.g., selector means 16 having selector valve 20, or the control unit enclosure 35 housing selector means 16) is configured to control a flow of the treatment solutions contained in respective containers into the block via a valve (e.g., selector valve 20) by, for example, sequentially delivering the treatment solutions from respective containers to the handpiece through the block. Palmer, Abstract, 5:13-16, 8:6-21, FIGS. 1, 4, 5A-5C.



Karasiuk, FIG. 4 (annotated)

Alternatively or additionally, Karasiuk describes “an adjustable valve 78 or other means for varying an amount of air that is allowed into the tube 14.” Karasiuk, 7:19-23, FIG. 6. Karasiuk also discloses “a valve or other flow control mechanism may be provided in the fluid delivery line 14 to control the amount of liquid passing through the line.” *Id.* at 7:30-33. In Karasiuk-Palmer,

a POSITA would have been motivated to place adjustable valve 78 in Palmer's control unit enclosure 35 for added portability and/or organization.

Thus, Karasiuk-Palmer renders it obvious that the block (*e.g.*, Palmer's selector valve 20, liquid solution coupling and selector means 16, and/or control unit enclosure 35) is configured to control a flow of the first treatment fluid contained in the first container (*e.g.*, Palmer's reservoir 121) and the additional treatment fluid contained in the at least one additional container (*e.g.*, Palmer's reservoir 122) into the block with a valve (*e.g.*, Palmer's selector valve means 20 or Karasiuk's adjustable valve 78) when the first container and the at least one additional container are connected to the console.

(5) Claim 9

As discussed at [8], Karasiuk-Palmer renders it obvious that the system is configured to control a flow (*e.g.*, using Palmer's selector valve means 20 or Karasiuk's adjustable valve 78) of the first treatment fluid contained in the first container (*e.g.*, Palmer's reservoir 121) to the handpiece (*e.g.*, Karasiuk's device 10) through the block (*e.g.*, Palmer's selector valve 20, liquid solution coupling and selector means 16, and/or control unit enclosure 35) when each of the first container and the handpiece is connected to the console.

(6) Claim 10

As discussed at [8], Karasiuk-Palmer renders it obvious that the system is configured to separately control a flow (*e.g.*, using Palmer's selector valve means 20 or Karasiuk's adjustable valve 78) of a second treatment fluid contained in the at least one additional container (*e.g.*, Palmer's reservoir 122) to the handpiece (*e.g.*, Karasiuk's device 10) through the block (*e.g.*, Palmer's selector valve 20, liquid solution coupling and selector means 16, and/or control unit enclosure 35) when each of the first container, the at least one additional container, and the handpiece are connected to the console. Thus, Karasiuk- Palmer renders this claim obvious based

on Palmer's disclosure of separate control of different treatment fluids being delivered to the handpiece. *Id.*

To the extent that the term "separately" is interpreted to require a separate control mechanism for the second treatment fluid, Karasiuk's adjustable valve 78 acts as a separate control mechanism. Karasiuk, 7:17-45. When Palmer's selector valve 20 connects the handpiece to a first container (*e.g.*, Palmer's reservoir 121), Karasiuk's adjustable valve 78 separately controls the flow of a first treatment solution in the first container, and when Palmer's selector valve 20 connects the handpiece to a second container (*e.g.*, Palmer's reservoir 122), Karasiuk's adjustable valve 78 separately controls the flow of a second treatment solution in the second container.

Alternatively, to the extent Complainant argues that the claimed "block" requires a manifold and that Palmer does not disclose it (as discussed in [1.3], [1.3a], and [1.3b] above), a POSITA would have found it obvious to use a manifold to implement Palmer's switching treatment fluids as a separate control for each treatment fluid. Using a manifold for selecting between different treatment fluids with a separate control for each treatment fluid was well-known and would have been within a POSITA's general knowledge. Based on this general knowledge, a POSITA would have found it obvious to implement Palmer's functionality using a manifold for selecting between different treatment fluids by using a separate control for each treatment fluid. Indeed, a POSITA would have viewed a manifold having a separate control for each treatment fluid as one of a finite number of options to achieve the functionality described by Palmer that would have been obvious to try. A POSITA would have had a reasonable expectation of success to implement Palmer's switching between different fluids and providing a single fluid output using such a manifold, as it would have merely involved a simple substitution of one well-known element for another to obtain predictable results.

(7) Claim 11

[11pre]

See [1pre].

[11.1]

As discussed for [1.1], Karasiuk-Palmer includes the console (*e.g.*, Palmer's mobile cart 170) configured to receive a first container and at least one additional container. Palmer, FIGS. 2, 4, 11B. Further, Karasiuk-Palmer renders obvious the fluid control member. As discussed in [1.3], [1.3a], and [1.3b], Karasiuk-Palmer's system includes "liquid solution coupling and selector means 16" including "selector valve means 20," which is housed in "control unit enclosure 35," that is connected to Palmer's solution reservoirs (*first* and *second containers*) and *configured to be in fluid communication with* the reservoirs. *Id.* A POSITA would have understood and found obvious that Palmer's selector valve means 20, Palmer's liquid solution coupling and selector means 16, or Palmer's control unit enclosure 35 would constitute the *fluid control member*.

This aligns with the '287 patent's limited disclosure, which is silent as to the term "fluid control member" while allegedly describing a "manifold" or "manifold system" as having similar structure and functionality. '287 Patent, 5:28-30, Abstract. As discussed in [1.3], [1.3a], and [1.3b] above, Karasiuk-Palmer describes a manifold. Palmer, 8: 22-9:16, FIG. 4.

Alternatively, to the extent Complainant argues that the "fluid control member" requires the use of a manifold and that Karasiuk-Palmer's system does not comprise a manifold, a POSITA would have found it obvious to use a manifold to implement the functionality of switching treatment fluids described by Palmer. *See supra* [1.3], [1.3a], and [1.3b] (discussion of the "block").

Lastly, Palmer's control unit enclosure 35 (*fluid control member*), which includes the coupling and selector means 16 having the valve 20, is included in "mobile cart 170" (*console*). Palmer, 9:58- 10:16, 5:13-14, 4:53-68, 8:22-9:16, FIG. 11B; *supra* [1.3], [1.3a], and [1.3b].

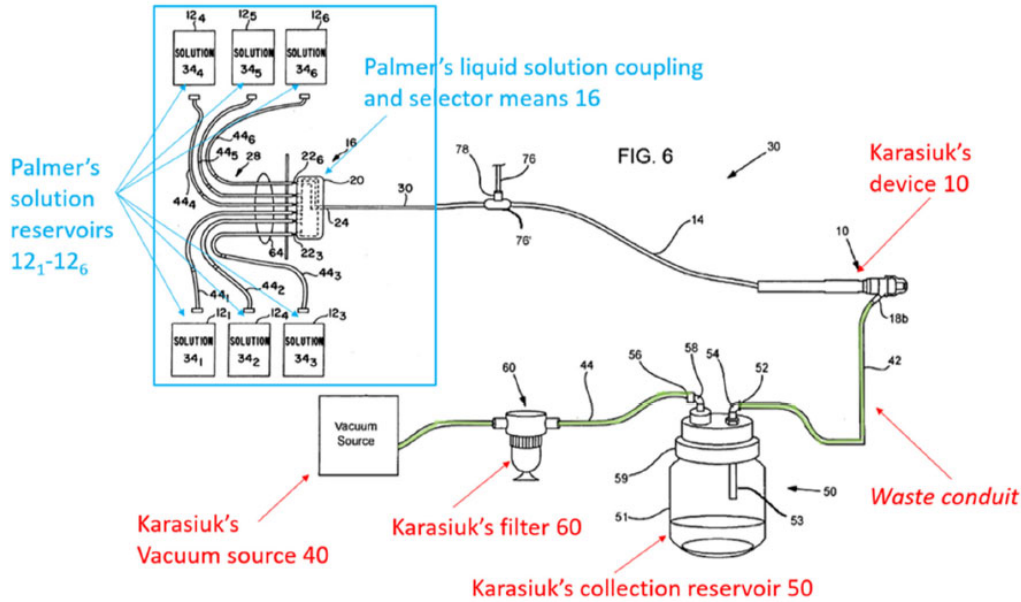
[11.2]

See [1.2].

[11.3]

As discussed in [1.4] and [1.5], Karasiuk describes "vacuum source 40" and "collection reservoir 50" (*waste conduit*) for removing "waste materials (abraded skin particles, and optionally, fluids)." Karasiuk, 6:52-7:1-8, 8:6-44, FIG. 6. As shown in Modified FIG. 6, Karasiuk's collection reservoir 50 (*waste conduit*) is in fluid communication with device 10 (*handpiece assembly*) and vacuum source 40 (*vacuum source*). In addition, the *vacuum source* 40 and the device 10 (*handpiece assembly*) are in fluid communication with the collection reservoir 50 via "the vacuum line between device 10 and vacuum source 40" (*waste conduit*). Karasiuk, 6:55-58.

As discussed in [1.1], Karasiuk's device 10 (*handpiece assembly*) is connected to Palmer's "liquid solution coupling and selector means 16" (part of the *console*) via "tube 14." Karasiuk, 6:52-67, 7:17-45, 8:6-22. Similarly, Karasiuk's collection reservoir 50 and "the vacuum line between device 10 and vacuum source 40" (e.g., collectively vacuum line 42, second vacuum line 44, vacuum line 46) (*waste conduit*) are also connected to the *console*.



Further, Karasiuk's handheld device 10 defines "opening or port 18b" for "connection of a vacuum source ... via a vacuum line" and to *move* "the exfoliated skin particles and any other waste that is removed through the microdermabrasion process" *away from* the handheld device. Karasiuk, 6:43-46, 8:31-34.

[11.4]

As discussed in [11.1], Karasiuk-Palmer renders it obvious that when each of the first container (*e.g.*, Palmer's reservoir 121) and the second container (*e.g.*, Palmer's reservoir 122) are connected to the console (*e.g.*, Palmer's wheeled cart 170), the fluid control member (*e.g.*, Palmer's selector valve means 20, liquid solution coupling and selector means 16, or control unit enclosure 35) is configured to be in fluid communication with each of the first container and the second container. *See* [1.1], [1.3], [1.3a], and [1.3b], [1.6], [1.8], [11.1].

[11.5]

As discussed in [1.5]-[1.6] and [11.3], Karasiuk-Palmer's *handpiece assembly* is connected to the *console* ([11.1]). Further, Palmer discloses "a selector valve for fluidly coupling the handpiece to a selected one of the liquid solutions." Palmer, Abstract, FIG. 1, FIGS.5A-5C.

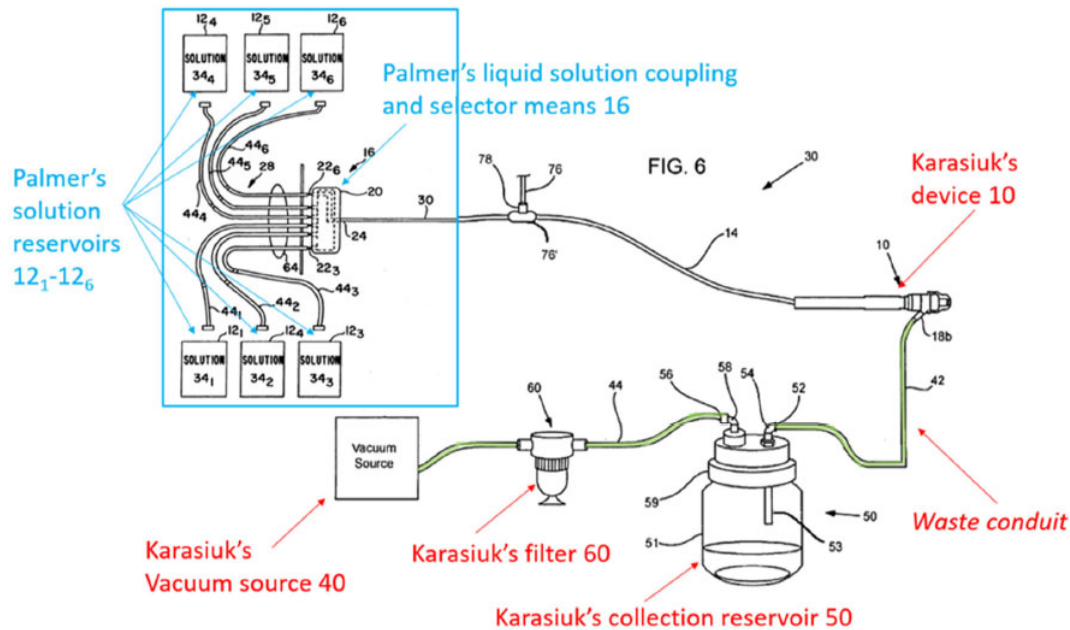
Specifically, Palmer's selector valve means 20 (fluid control member; [11.1]) is configured to select which one of reservoirs 121-126 is connected to the handpiece. Palmer, 8:6-21. Accordingly, Karasiuk-Palmer renders it obvious that when the handpiece is connected to the console, the fluid control member (*e.g.*, Palmer's selector valve means 20, liquid solution coupling and selector means 16 having the valve means 20, or control unit enclosure 35 housing the selector means 16) is configured to be in fluid communication with the handpiece.

[11.6]

See [1.1], [1.3], [1.3a], [1.3b], [1.5]-[1.6], [1.8], [11a], [11c]-[11e] as to (i) each of the first and second containers containing treatment material, (ii) the first and second containers being connected to the console, and (iii) the handpiece assembly being connected to the console.

As discussed in §IV.C.2, 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.

Karasiuk discloses that upon forming a vacuum loop, the fluid contents in the fluid reservoir are "drawn through tube 14 and into device 10...and are applied to the skin." Karasiuk, 8:6-9.



Karasiuk-Palmer (Annotated)

As discussed in §IV.C.2, it would have been obvious that Karasiuk's *vacuum source* 40 is connected to collection reservoir 50 and device 10 (handpiece assembly) to remove waste/debris as well as to pump treatment solutions from Palmer's fluid containers. Karasiuk, 2:66-3:3, FIG. 6. As discussed in [11.3] above, Karasiuk's handheld device 10 defines "opening or port 18b" for "connection of a vacuum source ... via a vacuum line" and to remove "the exfoliated skin particles and any other waste" from the handheld device. Karasiuk, 6:43-46, 8:31-34, FIG. 1. Thus, a POSITA would have understood and found obvious that Karasiuk-Palmer's system is configured to create a vacuum along a distal end (*e.g.*, Karasiuk's treatment tip 20) of the handpiece assembly using the vacuum source (*e.g.*, Karasiuk's vacuum source 40) to selectively draw treatment material from the first container or the second container to the handpiece.

(8) Claim 12

The limitations of claim 12 are substantially the same as [1.8], and the analysis of [1.8] similarly applies here.

(9) Claim 14

See [1.4].

(10) Claim 15

See [1.1], [1.3], [1.3a], [1.3b], [1.6]-[1.8]. As discussed in [1.8], for example, Karasiuk-Palmer's system is configured to deliver different treatment materials contained in respective containers to the handpiece sequentially. Palmer, 6:46-51, 11:9-12. Thus, a POSITA would have recognized that when Palmer's liquid solution coupling and selector means 16 connects the handpiece to a first container, the system is configured to deliver a single treatment material from the first container to a patient's skin. Further, to the extent that a user only needs to be treated with one treatment solution from a first container, a POSITA would have used Palmer's liquid solution coupling and selector means 16 to connect the handpiece to the first container, so that the system delivers a single treatment material from the first container to a patient's skin.

(11) Claim 16

The Karasiuk-Palmer system "pertains to dermatology, more particularly to *skin* treatment and conditioning." Karasiuk, 1:6-7, 5:53-6:5, 7:17-45 (emphasis added). Thus, it would have been obvious that Karasiuk-Palmer's treatment material is a skin treatment fluid.

(12) Claim 22

[22pre]

See [1pre].

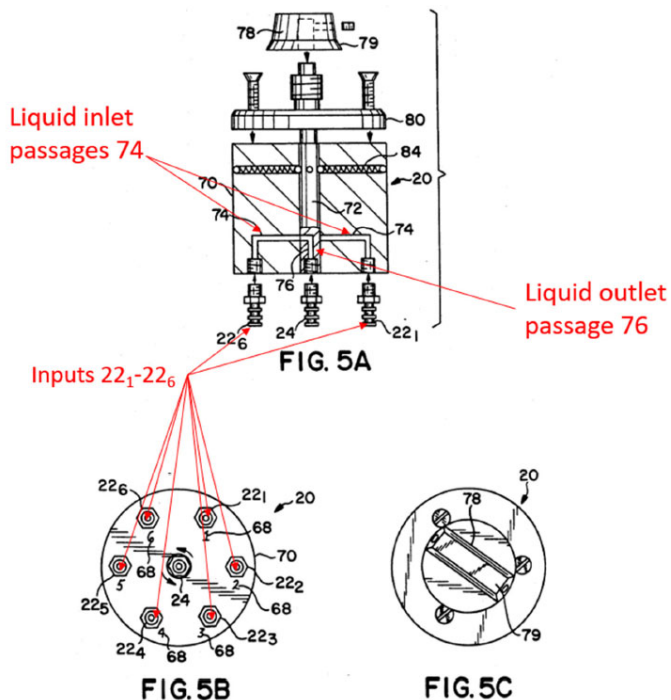
[22.1]

See [1.1], [1.6].

[22.2]

As discussed at [1.3], [1.3a], and [1.3b], Karasiuk-Palmer renders obvious a block (*e.g.*, Palmer's selector valve means 20) that is configured to selectively be in fluid communication with

the first and additional containers when the first and at least one additional containers are connected to the console. A POSITA would have understood and found obvious that this block has one or more passages or spaces (*collection lumen*), such as Palmer's outlet passage 76, which is configured to selectively be in fluid communication with the first container and the additional container. Palmer, Abstract, 5:1-9, 8:6-53, FIGS. 1, 5A-5C.



Palmer, FIG. 5A-5C (annotated)

Alternatively or additionally, a POSITA would have understood and found obvious that other fluid passages and spaces defined in Karasiuk-Palmer would constitute what the Complainant deems the “*collection lumen*”. For example, a passage/space within one or more of (1) Palmer's output 24, (2) Palmer's second tubing means 30, (3) Karasiuk's tube 14, and (4) Karasiuk's de vice 10 (e.g., Karasiuk's cannula 16) would constitute a *collection lumen*. Karasiuk, 5:4-42, 6:6-35, 6:43-51, 7:17-45, 8:6-22, FIGS. 1-2, 6; Palmer, 5:1-9, 9:1-6, FIGS. 1, 4. This aligns with the '287 patent's disclosure of “lumen” 90, 92 in handpiece assembly 18. '287 Patent, 7:65-

8:12. Further, as discussed in [1.3], [1.3a], and [1.3b], even assuming that a manifold is required for claim 22, a POSITA would have found it obvious to use a manifold having a collection lumen to implement Palmer's switching treatment fluids. A manifold is a well-known structure that may include a tube or channel (***collection lumen***) for selectively flowing different treatment fluids.

[22.3]

Karasiuk-Palmer renders obvious a handpiece (*e.g.*, Karasiuk's device 10) having a working end (*e.g.*, Karasiuk's treatment tip 20), the working end of the handpiece being configured to contact skin tissue of a subject during use. Karasiuk, 5:4-19, 5:56-58 ("A treatment tip 20... is smooth surfaced and adapted to glide over the skin surface for application of lotions/vitamins or other fluids thereto during processing"), 7:65-8:5, FIGS. 1A-1B; *supra* [1.2].

[22.4]

See [1.4]-[1.7], [22.2]-[22.3] as to the working end of the handpiece being in fluid communication with a vacuum source, and the handpiece being connected to the console.

As discussed in [11.6], Karasiuk-Palmer's ***vacuum source*** 40 is connected to the handheld device 10 (***handpiece***) and configured to, when activated, pump treatment solutions from the containers to the handpiece and remove waste/debris by creating a vacuum (***suction force***) along the device's tip 20 (***distal end*** or ***working end of the handpiece***). Karasiuk, 6:43-51, 8:31-44, 5:53-6:5.

Further, Karasiuk's "device 10 is positioned so as to place tip 20 in contact with the skin surface to be microabraded and the vacuum source is turned on to establish a vacuum within the system 30." Karasiuk, 7:65-8:1. "Upon forming the vacuum loop as described above, 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." Karasiuk, 8:6-9.

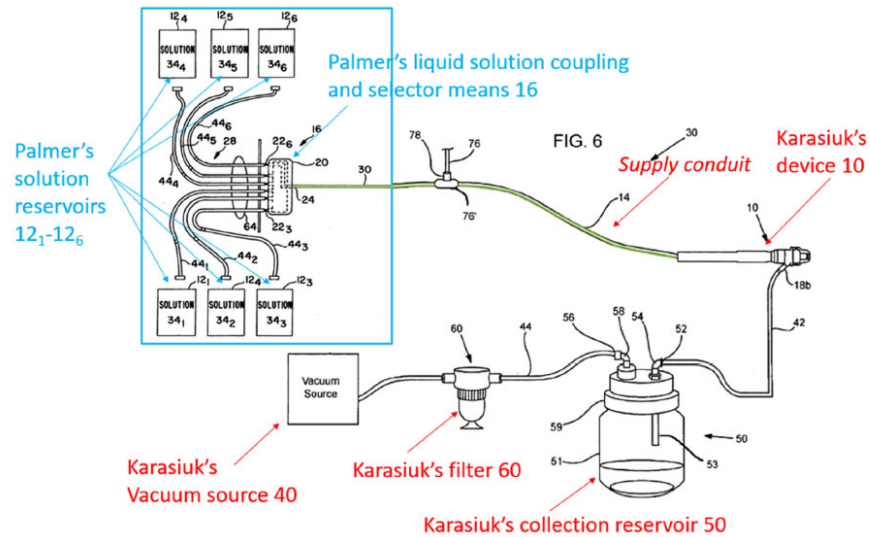
Further, Karasiuk-Palmer's **collection lumen** (e.g., a passage/space within selector valve means 20 or handpiece 10; *see* [22.2]) is fluidly connected to the working end of the handpiece, as illustrated in Modified FIG. 6. Palmer, Abstract, 5:1-9, 8:6-53, FIG. 1, FIGS. 5A-5C. As discussed for [22.2], Karasiuk-Palmer's **collection lumen** (e.g., Palmer's outlet passage 76 or Karasiuk's cannula 16) is in fluid communication with the first and additional containers. Thus, it would have been understood and obvious that, in Karasiuk-Palmer, the working end of the handpiece is in fluid communication with the first or additional container through the collection lumen.

[22.5]

As discussed in [22.2] and [22.4], Karasiuk-Palmer's **collection lumen** (e.g., Palmer's outlet passage 76 or Karasiuk's cannula 16) is fluidly connected to the working end of the handheld device 10.

As shown in [22.2], Karasiuk-Palmer's cannula 16 (**collection lumen**) defined in the handheld device 10 is fluid communication with the treatment tip 20 (**working end**) of the handheld device 10 via passageway 16c and opening 16d (**supply conduit**). Karasiuk, FIGS.1-2, 6:6-35, 6:36-42, 6:43-51, 8:6-22.

Additionally, as discussed in [22.2] and illustrated in Modified FIG. 6 below, Karasiuk-Palmer's outlet passage 76 (**collection lumen**) defined in the valve means 20 ([22.2]) is fluid communication with the working end of the handheld device 10 via a **supply conduit** (annotated in green).



Karasiuk, Modified FIG. 6

[22.6]

See [1.1], [1.6], [1.8].

(13) Claim 23

[23.1]

See [1.4].

[23.2]

See [1.6] as to the handpiece and the waste container being connected to the console. See [1.7] and [11c] as to the handpiece being in fluid communication with the vacuum source and a waste container through a waste conduit (*i.e.*, “second conduit” in [1.7]).

[23.3]

See [1.1], [1.3], [1.3a], [1.3b], [1.6], [1.8]. Notably, a POSITA would have found it obvious to configure Karasiuk-Palmer to achieve sequential or simultaneous delivery of treatment fluids from the first container and at least one additional container.

(14) Claim 26

[26pre]-[26.5]

See [1pre]-[1.5].

[26.6]-[26.7]

See claims 2 and 3.

(15) Claim 28

[28.1]

See [1.4].

[28.2]

See [1.1], [1.5]-[1.7], [11c], and claim 23.

(16) Claim 29

See [1.8], [1.1], [1.3], [1.3a], [1.3b], [1.5]-[1.6], and claim 8.

(17) Claim 34

See [1.1], [1.3], [1.3a], [1.3b], [1.6], [1.8], and claim 8.

(18) Claim 35

See claim 9.

(19) Claim 36

See claim 10.

(20) Claim 37

[37pre]-[37.5]

See [1.pre]-[1.5].

[37.6]- [37.7]

See claims 9 and 10.

(21) Claim 39

[39.1]

See [1.4].

[39.2]

See [1.5]-[1.7], [28.2], [11c], claim 23.

(22) Claim 40

See [1.1], [1.3], [1.3a], [1.3b], [1.5]-[1.6], [1.8], claims 8 and 29.

(23) Claim 45

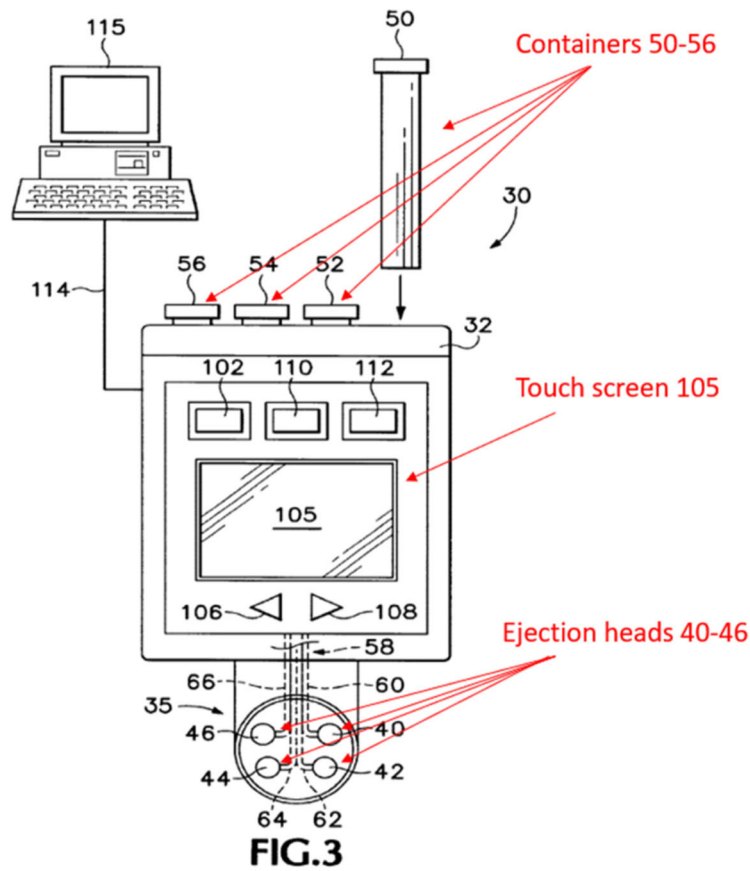
See [1.1], [1.3], [1.3a], [1.3b], [1.6], [1.8], [23.3], claims 8, and 34.

3. Karasiuk in view of Palmer in view of Trueba

Karasiuk-Palmer's modified apparatus is discussed above in §IV.C.2.

a) Trueba

Trueba discloses a fluid delivery system including multiple containers 50-56 and pump means (e.g., ejection heads 40-46). Trueba, Abstract, 8:49-11:3, FIG. 3.



Trueba, FIG. 3 (annotated in red)

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). Trueba, FIG. 3. 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." Trueba, 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. Trueba, 11:42-12:8, FIG. 3.

Using this computer control, multiple compositions can be automatically dispensed simultaneously or sequentially. Trueba, 3:4-8, 5:18-6:9, 6:10-16, 11:4-34. Trueba's device can be programmed to respond to changing clinical circumstances. Trueba, 11:15-20. Further, the device can be programmed to "prevent unauthorized alteration of dosages" and "permit certain ranges of dosages to be administered." Trueba, 12:2-9.

b) 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. 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. The combined device also includes a display (e.g., Trueba's touch screen 105) that indicates which solution is being delivered.

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.

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. Trueba, 3:34-38, 4:65-5:17, 6:1-9, 6:27-7:9, 10:52-11:49, FIG. 1.

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." Trueba, 6:1-9, 12:2-5.

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." Trueba, 11:42-12:8, FIG. 3.

A POSITA would have had a reasonable expectation of success in implementing the combination given the technical similarities between Karasiuk, Palmer, and Trueba. 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." Trueba, 3:22- 27. Trueba also discloses a system similar to Palmer's by selecting different treatment materials from different containers. Trueba, 3:4-8, 5:14-26, 11:4-34, FIG. 3.

Further, Karasiuk-Palmer-Trueba would merely constitute the use of a known technique to improve similar devices in the same way. Indeed, by the Priority Date, computer (e.g., PLC) controlled fluid delivery systems were well-known. Pond, FIG. 3; Trueba, 11:4-34, FIG. 3. The modification would require nothing more than automating the manual process in Karasiuk-Palmer with well-known automation techniques.

(1) Claims 1, 12, 22, 23, 29, 40

Karasiuk-Palmer-Trueba further renders obvious [1.8], [12], [22f], [23c], [29] and [40] based on Trueba's teachings. To the extent that the term "sequentially" is interpreted to require

automatic switching between first and second treatment fluids, Karasiuk-Palmer-Trueba renders this limitation obvious. Trueba, 3:4-8, 5:18-6:9, 6:10-16, 11:4-34, 12:2-9. As discussed in §IV.C.3, 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. Trueba, 6:6-9 (emphasis added). 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. *In re Venner*, 262 F.2d 91, 95 (C.C.P.A 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 and 24-25 that inherit the same subject matter are rendered obvious by Karasiuk-Palmer-Trueba.

(2) Claims 3, 26

Karasiuk-Palmer-Trueba further renders obvious [3] and [26j] based on Trueba's teachings. As discussed regarding [1.8] above, to the extent that the term "one at a time" is interpreted to require automatic switching between first and second treatment fluids, Karasiuk-Palmer-Trueba renders this limitation obvious. Trueba, 3:4-8, 5:18-6:16, 11:4-34, 12:2-9. Similarly, dependent claims 28-36 that inherit the same subject matter are rendered obvious by Karasiuk-Palmer-Trueba.

(3) Claims 4, 17, 24, 30, 41

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

(4) Claims 5, 31, 42

As discussed in §IV.C.3, Karasiuk-Palmer-Trueba includes a user input device (*e.g.*, Trueba's touch screen 105) to select a flow of fluids from containers to the handpiece. Trueba, 11:40- 12:8, FIG. 3.

(5) Claims 6, 19, 32, 43

As discussed in § IV.C.3, Karasiuk-Palmer-Trueba's user input device includes a touch screen. Trueba, 11:40-12:8, FIG. 3.

(6) Claims 7, 20, 33, 44

As discussed in § IV.C.3, Karasiuk-Palmer-Trueba's system includes a display indicating which solution is being delivered. Trueba, 11:40-12:8, FIG. 3.

If an additional display is required separate from the touch screen, Trueba discloses coupling external computer 115 to controller 100. Trueba, 12:9-36, FIG. 3. A POSITA would have understood and found obvious that this external computer 115 would include an additional display separate from Trueba's touch screen 105.

(7) Claims 18, 25

Similar to claim 5, Karasiuk-Palmer-Trueba's apparatus includes a user input device to facilitate control of a flow of fluids or treatment materials from the containers to the handpiece assembly. Trueba, 11:40-12:8, FIG. 3.

4. Greenberg in view of Trueba

a) 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. For example, in the resulting system, Greenberg's valve106 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. The combined device also includes a display (*e.g.*, Trueba's touch screen 105) that indicates which solution is being delivered.

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 user experience, automation, and clarity. A POSITA would have been motivated by the same reasons that would have motivated the Karasiuk-Palmer-Trueba combination (*see* § IV.C.3) and would similarly apply for the Greenberg-Trueba combination.

A POSITA would have had a reasonable expectation of success in implementing the combination given the technical similarities between Greenberg and Trueba. 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. Trueba, 3:22-27, 3:4-8, 5:14-26, 11:4-34, FIG. 3. The Greenberg-Trueba combination would merely constitute the use of a known technique to improve similar devices in the same way. By the Priority Date, computer (*e.g.*, PLC) controlled fluid delivery systems were well-known. Pond, FIG. 3; Trueba, FIG. 3. The modification requires nothing more than automating the manual process in Karasiuk-Palmer with well-known automation techniques. Trueba, 11:4-34.

(1) Claims 1, 12, 22, 23, 29, 40

Greenberg-Trueba renders claims 1, 12, 22, 23, 29, and 40 obvious for the same reasons discussed above with respect to Greenberg. Greenberg-Trueba further renders claims 1.8, 12, 22f, 23c, 29, and 40 obvious based on Trueba's teachings.

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. As discussed in §IV.C.4, 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. Trueba, 6:6-9 (emphasis added). A POSITA would have found it obvious to employ Trueba’s automation in the system of Karasiuk-Palmer provide added precision (avoiding human error), automation, and clarity, resulting in automatic switching and delivery of treatment fluids in a sequential manner. *In re Venner*, 262 F.2d at 95. Similarly, dependent claims 2-10 and 24-25 that inherit the same subject matter are rendered obvious by Greenberg-Trueba.

(2) Claims 3, 26

Greenberg-Trueba further renders obvious claims 3 and 26 based on Trueba’s teachings. As discussed regarding [1.8] above, to the extent that the term “one at a time” is interpreted to require automatic switching between first and second treatment fluids, Greenberg-Trueba renders such a limitation obvious. *Id.*; Trueba, 3:4-8, 5:18-6:9, 6:10-16, 11:4-34, 12:2-9.

Similarly, dependent claims 28-36 that inherit the same subject matter are rendered obvious by Greenberg-Trueba.

(3) Claims 4, 17, 24, 30, 41

As discussed above, 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. Trueba, 3:34-38, 4:65-5:17, 6:1-9, 6:27-7:9, 10:52-11:49, 12:2-5, FIG. 1.

(4) Claims 5, 31, 42

As discussed above, Greenberg-Trueba's system comprises a user input device (*e.g.*, Trueba's touch screen 105) to select a flow of fluids from the first and at least one additional container to the handpiece. Trueba, 11:42-12:8, FIG. 3.

(5) Claims 6, 19, 32, 43

Greenberg-Trueba's system comprises a touch screen (*e.g.*, Trueba's touch screen 105). Trueba, 11:40-12:8, FIG. 3.

(6) Claims 7, 20, 33, 44

Greenberg-Trueba's system comprises a display (*e.g.*, Trueba's display screen 105) that indicates which solution is being delivered. Trueba, 11:40-12:8,

FIG. 3. In the event an additional display is required separate from the touch screen, Trueba also discloses coupling an external computer 115 to controller 100. Trueba, 12:9-36, FIG. 3. A POSITA would have understood and found obvious that this external computer 115 would include an additional display separate from Trueba's touch screen 105.

(7) Claims 18, 25

Greenberg-Trueba's apparatus includes a user input device (*e.g.*, Trueba's touch screen 105) to facilitate control of a flow of fluids or treatment materials from the containers to the handpiece assembly. Trueba, 11:40-12:8, FIG. 3.

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