

**EXHIBIT C-0**  
**Initial Invalidity Chart for U.S. Patent No. 11,589,970**

As described in the accompany cover pleading, many of the features of the Asserted Patents are known in the prior art, as shown by the attached claim charts, and the table below. Ascentcare reserves the right to rely on references in the table below to supplement or replace the prior art in the attached claim charts. For example, Ascentcare reserves the right to use Hirsch or Isolite instead of Black or AirBug for the claim elements shown below:

| <b>US 11,589,970</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Prior Art</b>                                                                                                                                                                                                                                                                               |
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| Independent Claim 1. A mouthpiece comprising:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                       |
| Limitation 1(a): a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by:                                                                                                                                                                                                                                                                                                                        | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                       |
| Limitation 1(b): a first wall extending from the first end to the second end, wherein the first wall is narrower at the second end than at the first end,                                                                                                                                                                                                                                                                                                                                                                        | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                       |
| Limitation 1(c): a second wall located at a distance from the first wall and extending from the first end to the second end, wherein the second wall is also narrower at the second end than at the first end,                                                                                                                                                                                                                                                                                                                   | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                       |
| Limitation 1(d): the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall, and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the second wall in a wave shape comprising one or more crests and one or more troughs, and | See Claim 19 of Ex. A-0.<br>To the extent any of the references fail to teach a bridge structure unconnected to the first wall, it would have been obvious to make the bridge structure separable. <i>In reDulberg</i> , 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961); MPEP 2144.04(V)(C). |

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| Limitation 1(e): a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;                                                                                                                                                                                                                                                                                                                    | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                                                                                                                     |
| Limitation 1(f): a suction connector extending from the first end of the main body portion and integral to the main body portion, the suction connector including a cavity extending longitudinally from the main body portion, the cavity in communication with the interior space of the pocket and extending from a first opening of the suction connector at the first end of the main body portion and through a length of the suction connector towards a suction port opening opposite from the main body portion; and | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                                                                                                                     |
| Limitation 1(g): a mouth prop molded in one piece, and wherein the suction connector extends through and past the mouth prop.                                                                                                                                                                                                                                                                                                                                                                                                 | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                                                                                                                     |
| Claim 9. The mouthpiece of claim 1, wherein the suction connector comprises a cutout corresponding to a protrusion on a vacuum adapter for an interlocking fit.                                                                                                                                                                                                                                                                                                                                                               | <p>Hirsch '321: FIGS. 19D, Ref. 630<br/> Black: FIG. 3A, Ref 47<br/> KR101082826: FIG. 3, Ref 113<br/> CN102631180: FIG. 8</p> <p>To the extent any reference is silent regarding this limitation, changes in size/proportion are obvious. <i>n re Rose</i>, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); <i>In re Rinehart</i>, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); MPEP 2144.04(IV)(A)</p> |
| Claim 10. The mouthpiece of claim 1, wherein the suction connector connects the interior of the pocket to a vacuum source, wherein activation of the vacuum source provides suction of fluids from the interior of the pocket toward the vacuum source.                                                                                                                                                                                                                                                                       | <p>Hirsch '321: FIG. 19A, Ref. 570 “The connection section 570 is configured to extend outside of a patient's mouth and attach to a multi-lumen tube for delivering illumination and vacuum suction to the intraoral device 200”<br/> Black: FIG. 4C, “a neck 246 defining a transverse anterior opening 247 therethrough.”<br/> KR101217041: FIG. 1, Ref. 10</p>                            |

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|                                                                                                                                                                                                                                                                                                                                                 | <p>KR101082826: FIGS. 2 and 3, [0027] “The insertion port (110) serves as a portion for coupling with the device body (200), with one end open and the interior hollow.”</p> <p>KR100654392: FIG. 1, “In addition, the tube connection portion (10) is formed with a tube connecting opening (11) on one side, where a light tube (3) is connected, which operates to suck in oral substances through air suction while the optical fiber (2) is integrated.”</p> <p>CN102631180: FIGS. 1-3,<br/>Johnson: FIG. 2, Vacuum tube 12<br/>Zorovich 1:10-18</p>                                                                                                                                                                                                                                                                               |
| Claim 11. The mouthpiece of claim 1, wherein at least one of the first wall, the second wall, or the connecting wall comprise a plurality of perforations.                                                                                                                                                                                      | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Claim 12. The mouthpiece of claim 11, wherein activation of a vacuum source associated with suction connector extending from the first end of the main body portion draws fluids from an exterior of the main body portion through one or more of the plurality of perforations into the interior space of the pocket of the main body portion. | <p>Hirsch ‘321: FIG. 19A, Ref. 570 “The connection section 570 is configured to extend outside of a patient's mouth and attach to a multi-lumen tube for delivering illumination and vacuum suction to the intraoral device 200”</p> <p>Black: FIG. 4C, “a neck 246 defining a transverse anterior opening 247 therethrough.”</p> <p>KR101217041: FIG. 1, Ref. 10</p> <p>KR101082826: FIGS. 2 and 3, [0027] “The insertion port (110) serves as a portion for coupling with the device body (200), with one end open and the interior hollow.”</p> <p>KR100654392: FIG. 1, “In addition, the tube connection portion (10) is formed with a tube connecting opening (11) on one side, where a light tube (3) is connected, which operates to suck in oral substances through air suction while the optical fiber (2) is integrated.”</p> |
| Claim 13. The mouthpiece of claim 1, further comprising a cheek retractor portion connected to the main body portion and having a surface that applies pressure when bent, wherein the pressure is based on resilience of the cheek retractor portion.                                                                                          | See Claim 19 of Ex. A-0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <p>Claim 15. The mouthpiece of claim 1, wherein the main body portion is formed by injection-molding as one piece.</p>                                                                 | <p>Hirsch '321: Abstract<br/> KR101082826: “[0032] The described mouse prop (100) is designed to be inserted into the oral cavity, made of synthetic materials such as clear silicone”<br/> KR100654392: FIG. 1, “The material may be synthetic resin (plastic) such as silicone or its equivalents, and is not limited to any specific material. Moreover, it is preferable to form the entire unit as a single piece”<br/> CN102631180: “The function is to thicken the glue position of the inner flow channel 7 so as not to pull the inner flow channel 7 apart when the mold of the tongue glue 14 is opened during the injection process.”<br/> Johnson: “The clamp body, handles and tongue are all integrally formed, preferably by injection molding, of a strong resilient and semi-rigid plastic.”<br/> To the extent any reference is silent regarding forming in one-piece<br/> Moreover, using injection molding to form plastics was within the general knowledge of a POSA.</p>                                                                                                                                                                                                                                                                                                                                                              |
| <p>Claim 16. The mouthpiece of claim 1, wherein a material that forms the main body portion is a flexible, translucent, high heat-resistant, autoclavable silicone-based material.</p> | <p>Hirsch '321: Col. 11 Ln. 19–35<br/> Black: Claims 3–7, 33, 34<br/> KR101217041: [0025]<br/> KR101082826: “[0032] The described mouse prop (100) is designed to be inserted into the oral cavity, made of synthetic materials such as clear silicone” &amp; “the mouse prop can be sterilized after use”<br/> KR100654392: FIG. 1, “The material may be synthetic resin (plastic) such as silicone or its equivalents, and is not limited to any specific material. Moreover, it is preferable to form the entire unit as a single piece”<br/> CN108042228: “The tongue plate portion 1 requires soft texture and does not cause damage to the tongue. Therefore, in some embodiments, the tongue plate portion 1 is made of medical silicone material, but from the standpoint of single use and cost saving, The tongue plate 1 can be made of plastic material.”<br/> CN105342717: In series, since the barrier sheet and the fins thereon are made of an approximately transparent silicone material, the LED lamp can provide good illumination for the entire mouth after being illuminated, and the doctor has a very simple operation and a very good field of vision. Moreover, using flexible, translucent, high heat-resistant, autoclavable silicone-based material to form a dental mouthpiece was within the general knowledge of a POSA.</p> |

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| Independent Claim 18. A mouthpiece comprising:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | See Claim 19 of Ex. A-0.                                                                        |
| Limitation 18(a): a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by:                                                                                                                                                                                                                                                                                                                         | See Claim 19 of Ex. A-0.                                                                        |
| Limitation 18(b): a first wall extending from the first end to the second end, the first wall having an interior surface facing the interior space of the pocket, and                                                                                                                                                                                                                                                                                                                                                              | See Claim 19 of Ex. A-0.                                                                        |
| Limitation 18(c): a second wall located at a distance from to the first wall and extending from the first end to the second end, the second wall having an interior surface facing the interior surface of the first wall,                                                                                                                                                                                                                                                                                                         | See Claim 19 of Ex. A-0.                                                                        |
| Limitation 18(d): the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from the interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall, and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the second wall in a wave shape comprising one or more crests and one or more troughs, and | See Claim 1 of Ex. C-0.                                                                         |
| Limitation 18(e): a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;                                                                                                                                                                                                                                                                                                                        | See Claim 19 of Ex. A-0.                                                                        |
| Limitation 18(f): a mouth prop molded in one piece and located at the first end of the main body portion; and                                                                                                                                                                                                                                                                                                                                                                                                                      | Hirsch '321: FIG. 19A, bite piece 250<br>Black: FIG. 2, Ref. 10<br>KR101217041: FIG. 1, Ref. 30 |

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|                                                                                                                                                                                                                                                                         | <p>KR101082826: FIGS. 2 and 3, [0029] “The tooth support section (120) is formed to extend a certain length forward from the insertion port (110), with interlocking grooves formed on the upper and lower sides, allowing the patient's upper and lower teeth to interlock,”</p> <p>KR100654392: FIG. 1, “The bite block (30)(30a) is provided between the tongue protection portion (20) and the tube connection portion (10), allowing easy securing in the oral cavity by being bitten by the user's teeth.”</p> <p>CN102631180: FIGS. 1, 3 and 4</p> <p>Johnson: FIG. 1, Chin holder 18</p> |
| <p>Limitation 18(g): a suction connector integral with the main body portion and extending from the first end of the main body portion past the mouth prop, wherein the suction connector includes a cavity in communication with the interior space of the pocket.</p> | <p>See Claim 19 of Ex. A-0.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**EXHIBIT C-1 (Park in View of One or Two of Black, AirBug, Baughan or Johnson, and the Skill of a PHOSITA)  
Initial Invalidity Chart for U.S. Patent No. 11,589,970**

Ascentcare incorporates by reference the cover pleading to its Initial Invalidity Contentions. These Initial Invalidity Contentions, including these claim charts, are not an admission regarding claim scope or the accused products, and, in particular, that the accused products, including any current or past versions of these products, are covered by, or infringe the Asserted Claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by the Parties. In addition, these Initial Invalidity Contentions should not be taken as an admission that any of the asserted claims satisfy the requirements of 35 U.S.C. § 112. Where Ascentcare identifies portions of the prior art reference below, those identifications are intended to be exemplary in nature and are based on Ascentcare's investigation to-date. Ascentcare reserves the right to rely on un-cited portions of the reference to establish invalidity of the Asserted Claims.

Pursuant to pre-AIA 35 U.S.C. § 103 and as described in the cover pleading and shown below Park, Black, Baughan, Johnson were patented or printed in a publication more than one year prior to the priority date of the '970 Patent, and therefore renders obvious, either alone or in combination with the other prior art, the knowledge of one of ordinary skill in the art, or one or more of the references identified in the cover pleading and/or one or more of the references from the other claim charts attached as exhibits to these contentions, U.S. Patent No. 11,589,970.

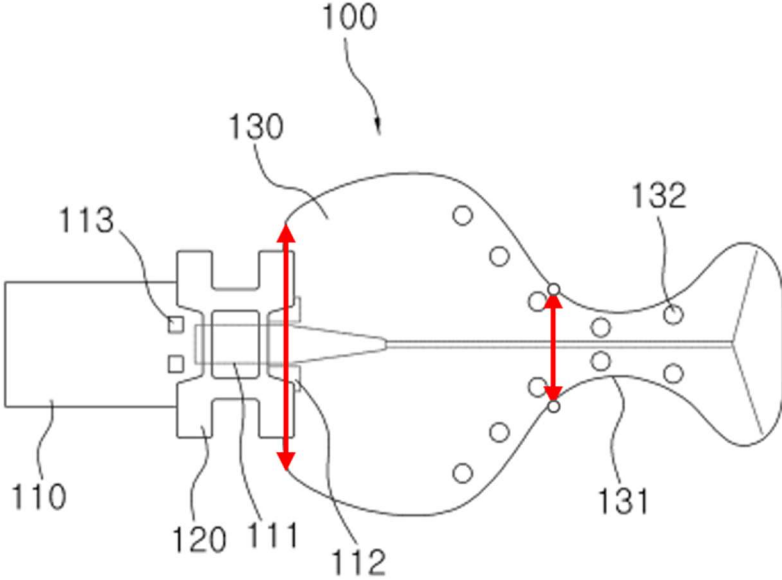
Pursuant to pre-AIA 35 U.S.C. § 103 and as described in the cover pleading and shown below, the AirBug Mouthpiece<sup>1</sup> was on sale or in public use more than one year prior to the priority date of the '970 Patent, and therefore anticipates and/or renders obvious, either alone or in combination with the other prior art, the knowledge of one of ordinary skill in the art, or one or more of the references identified in the cover pleading and/or one or more of the references from the other claim charts attached as exhibits to these contentions, U.S. Patent No. 11,589,970.

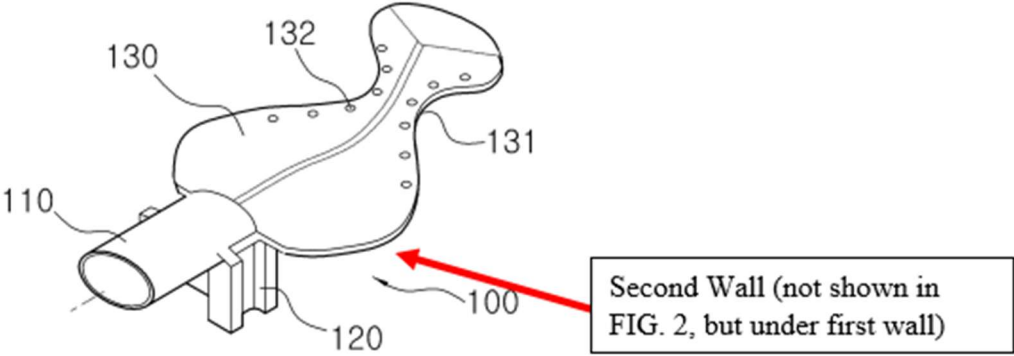
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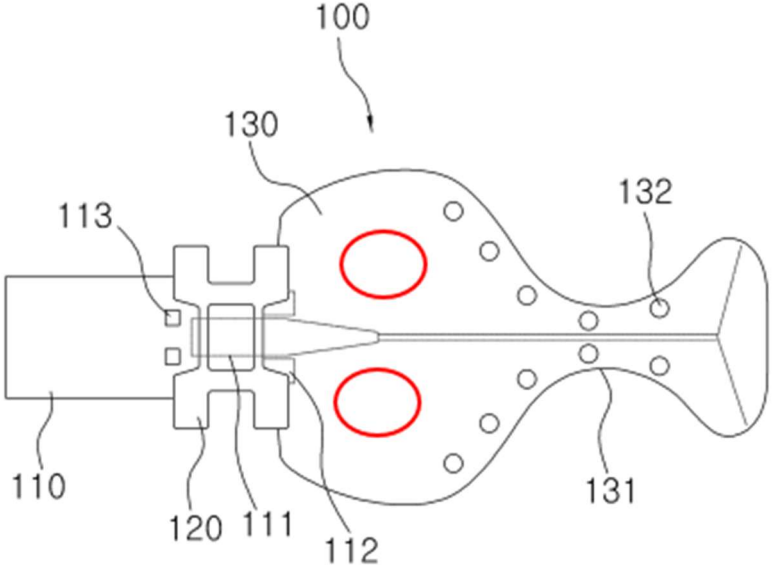
<sup>1</sup> It is Ascentcare's understanding that several of the embodying products discussed herein may have multiple embodiments over the years. Discovery is ongoing, and Ascentcare has issued subpoenas seeking the prior art embodiments. To the extent that Ascentcare currently relies on more current embodiments of these mouthpieces, upon information and belief, the differences in those embodiments are minor and do not affect the invalidity analysis. Ascentcare reserves the right to amend these contentions as discovery progresses. It is Ascentcare's understanding, for example that the AirBug Mouthpiece is a product embodying Black, and thus, any of the references to Black likewise support the AirBug Mouthpiece, and vice versa.

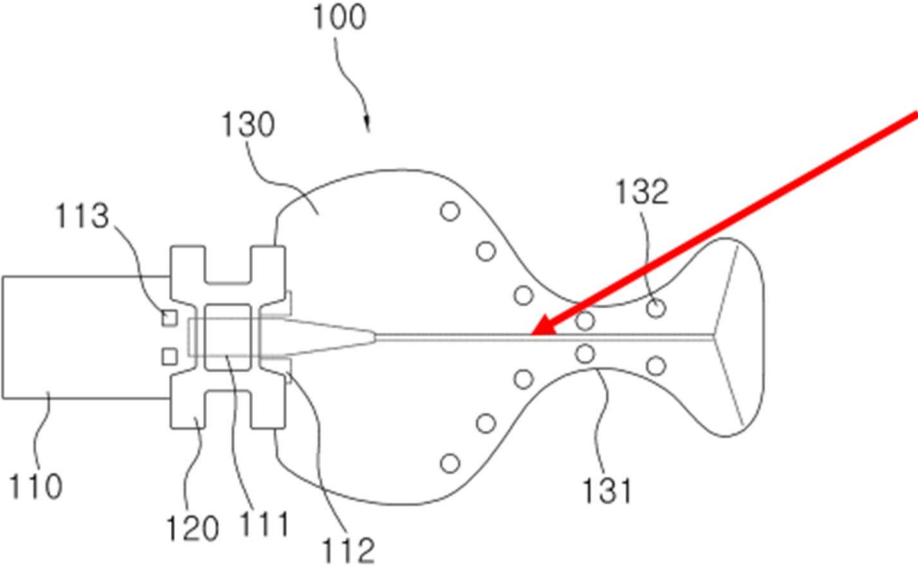
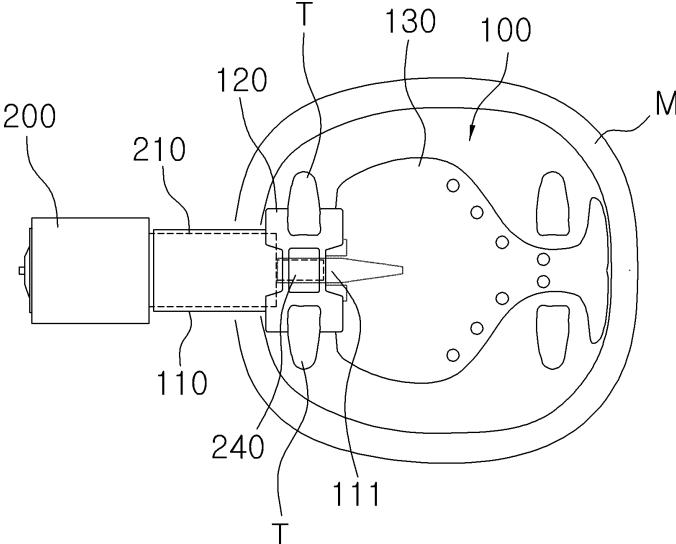
| The '970 Patent                                                                                                                                                                               | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 1[a] A dental mouthpiece comprising:                                                                                                                                                          | To the extent the preamble is limiting, each of the references discussed herein is a dental mouthpiece.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1[b] a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by: | <p>Park discloses a tongue retractor 130, which is a main body. Park, ¶ 26. As shown in FIG. 2 or 3, Park shows that the tongue retractor 130 has a wide portion and a narrower, concave portion 131 and then a wide cheek retractor at the end of the tongue retractor 130. <i>Id.</i> Thus, Park shows a main body that extends from a first end to a second end. <i>Id.</i></p> <p>The tongue retractor 130 is configured as a pocket defining an interior space. Park, ¶¶ 26-27 In fact, the tongue retractor 130 is a four-sided body with an anterior wall, a posterior wall, and two sidewalls that together enclose an interior open space where suction occurs. Park, FIG. 2 1-3 of Park. FIG. 2 even illustrates the sidewalls extending into the insertion port 110, thereby clearly demonstrating their presence. Park illustrates a continuous sidewall around all edges of the tongue retractor 130, and that continuous edge extends onto the insertion port 110 and the tooth support section 120. <i>Id.</i> Thus, Park illustrates an isolation mouthpiece with sidewalls. Park, FIG. 2</p> <p>The specification further supports this conclusion. As shown in FIG. 3, the mouth prop 100 includes two suction ports 112 formed in the hollow insertion port 110 and extending into the tongue retractor 130. Park, FIG. 3, ¶¶ 27-28 Park teaches that the insertion port 110 is hollow and only <i>one</i> end of the insertion port 110 is open. Park, ¶ 27-28. Park further teaches that the insertion port 110 has a central interior that includes a post fitting groove 111 and suction ports 112. <i>Id.</i> Because only one end of the insertion port 110 is open, Park teaches that the second end, where the suction ports 112 are formed (see Park, FIG. 2), is enclosed and extends into an interior space of the tongue retractor 130. Park, ¶ 26-31. Indeed, Park specifically teaches that the tongue retractor 130 extends from the insertion port 110. Park, ¶ 26.</p> <p>The suction ports 112 only extend partially into the tongue retractor 130, and the suction ports 112 do not extend to the through-holes 132 as a dedicated channel. Park, ¶ 26-31, FIG. 3 Additionally, Park fails to teach that any suction can occur through the sides of the mouth prop 100. Thus, a PHOSITA would understand that Park's mouth prop 100 has an interior open space that fluidly connects the holes 132 to the suction ports 112. Park, ¶¶ 30-31, FIG. 2 If the mouth prop 100 did not include an interior open space formed in the tongue retractor 130, then the holes 132 would serve no purpose, and the suction ports 112 would aspirate nothing. The existence of an interior chamber of the mouth prop is necessary to fluidly connect the suction ports 112 and the holes 132; otherwise Park would be inoperable to perform "suction of foreign substances in the oral cavity." Park, ¶ 10.</p> <p>Finally, Park depicts the suction ports 112 (and the socket 111) using a line of a lighter shade than the edges of the tongue retractor 130. Park, FIG. 3 This is likely because the suction ports are only partially visible through clear</p> |

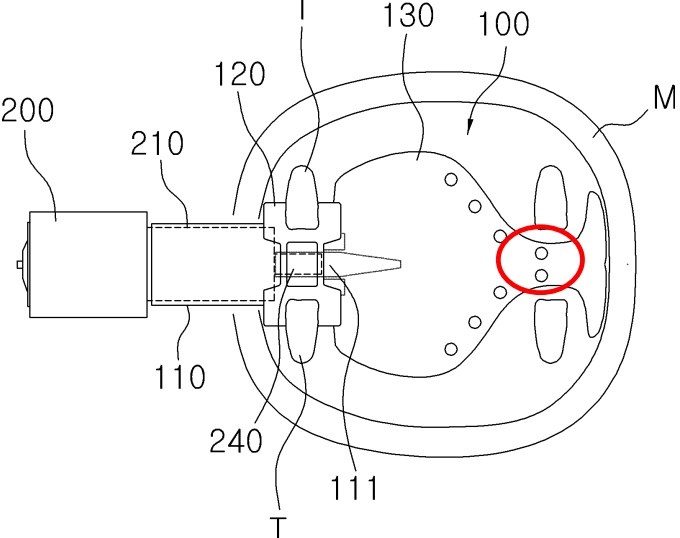
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                 | <p>silicone, but indicating that they extend into an internal chamber of the tongue retractor 130. Park, ¶32. These differences in shading are clearer on a computer screen than a printed copy.</p> <div> </div> <p>Indeed, a PHOSITA would know that a mouth prop having through holes 132 that do not fluidly connect to the suction ports 112 would allow debris and fluid to pass through the through holes 132 and down a patient's throat, something a PHOSITA would know to avoid. If the suction connector 112 was not fluidly connected to the holes 132 through the tongue retractor 130 of the mouth prop 100, the suction port 112 would serve no purpose or be extremely ineffective, and a patient might choke or experience severe discomfort by the debris, fluid, etc. passing through the holes 132 during a dental procedure.</p> <p>Moreover, a PHOSITA would know that a dentist would position the mouth prop 100 in a patient's mouth such that the concave area 131 would wrap behind teeth on the side of the mouth where a dentist would operate. Park, ¶ 47, 31. FIG. 6 2. This is because the whale tale end, opposite the suction connector 112, retracts the patient's cheek near a dental operation. Park, ¶ 31. If the through-holes 132 were not fluidly connected to the suction ports 112 through the tongue retractor 130, then the suction ports 112 of the mouth prop 100 of Park would be positioned at the furthest possible location in the mouth from the dental operation. A PHOSITA would know that suction should occur as close as possible to the operating area to maximize capture of debris, fluids, and aerosols. <i>Id.</i> The farther away suction is positioned from generated fluid, debris, blood, etc., the less powerful it becomes; meaning the suction would not effectively aspirate unwanted fluids and debris in the mouth. <i>Id.</i> In other words, a PHOSITA would understand that the mouth prop of Park fluidly connects the suction ports 112 to the holes 132 through an inner chamber of the tongue retractor 130 to guide and channel the suction applied through the suction ports. A</p> |

| The '970 Patent                                                                                                                                      | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                                                                                                                                                      | <p>PHOSITA would understand that the only logical reason a mouth prop configured to expel debris and fluid (Park, ¶ 28, 9) would include through holes 132 is to ensure that suction occurs through the holes 132 via a fluid connection with the suction ports 112, especially considering the holes 132 align with the location where a dental operation occurs. The only way the holes 132 would have an efficient fluid connection with the suction ports 112 is if the mouth prop 100 included an inner chamber through the mouth prop. <i>Id.</i> Thus, Park, at worst, implicitly teaches a four-sided mouth prop formed as a pocket with an inner chamber formed between the four walls. <i>Id.</i></p> <p>Thus, Park teaches a tongue retractor 130 configured as a pocket extending from the insertion port 110 to the cheek retractor near the concave portion 131 and enclosing an interior open space formed in the tongue retractor 130 between the suction ports 112 and the holes 132. <i>Id.</i></p> |
| <p>1[c] a first wall extending from the first end to the second end, wherein the first wall is narrower at the second end than at the first end,</p> | <p>As shown in FIG. 3, the tongue retractor 130 of Park has a first end that is narrower than the second end. Park, FIG. 3 (annotated).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| The '970 Patent                                                                                                                                                                                                                                                                                                           | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p>1[d] a second wall located at a distance from the first wall and extending from the first end to the second end, wherein the second wall is also narrower at the second end than at the first end,</p>                                                                                                                 | <p>The tongue retractor 130 of Park has a second wall that is exactly the same shape as the first wall. Park, FIG. 2-3 Thus, as shown in FIG. 3, the tongue retractor 130 of Park has a first end that is narrower than the second end.</p>  <p>Second Wall (not shown in FIG. 2, but under first wall)</p> <p>The second wall is spaced at a distance to the first wall because Park has an interior chamber and because of the existence of the sidewalls.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>1[e] the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall,</p> | <p>Park mentions that “common features,” such as anti-collapse structures, are “omitted.” Park, ¶ 22 However, a PHOSITA would understand that when suction is applied through the suction port 112, the first wall and the second wall are likely to collapse under the suction force. Baughan, 3:46-48 This collapsing would occur because Park teaches that the mouth prop comprises a flexible material, such as silicone. Park, ¶32, 34. The sidewalls and the insertion port 110 would help resist this collapsing force, but a PHOSITA would understand that additional anti-collapsing structure would assist at the weakest areas of the tongue retractor 130.</p> <p>More specifically, an area of the mouth prop furthest from a rigid structure, such as the sidewall, the socket 111, or the insertion port 110 would be most likely to collapse under suction. A PHOSITA would understand that these areas, depicted below, are the most likely areas to collapse under suction due to their location and distance from rigid structure. <i>Id.</i></p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                 |  <p>If these areas collapse under suction, suction power would be significantly reduced or blocked entirely. Thus, a PHOSITA would have been motivated to add anti-collapsing structure to prevent collapse. <i>Id.</i></p> <p>Moreover, it is unclear whether the mouth prop 100 includes a spine or other rigid structure running through the middle of the mouth prop 100. FIG. 3 of Park suggest that something is running from the socket 111 toward the cheek retractor end of the mouth prop. Park, FIG. 3.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                 |  <p>However, this line is not shown in FIG. 6.</p>  <p>Thus, the line shown in FIG. 3 may not provide any rigidity or anti-collapse features at all and may only assist in guiding light from the light guide 240. Park, ¶ 39 Thus, the weakest part of the mouth prop may actually be the exact center of the mouth prop (see annotated FIG. 6 below).</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|                 |  <p>Regardless, a PHOSITA would know that Park is weak in at least one area and may collapse or restrict fluid communication due to wall collapse caused by suction due to the flexible material comprising the mouth prop 100. Park, ¶ 32 To prevent collapse or restriction, a PHOSITA would have been motivated to add mechanical elements that prevent collapse under suction.</p> <p>Baughan teaches such a mechanical element that prevents collapse under suction. Baughan, 3:43-48. Specifically, Baughan teaches three projecting discs 17 that prevent collapse under suction when a sleeve is inserted over a tube 15. Baughan, 2:19-25, 2:51-55, 3:43-48. The discs 17 project outward from the tube, span the distance between the tube and the sleeve, and engage the sleeve. <i>Id.</i> These rigid structures, spaced apart from each other, prevent the sleeve from collapsing under suction. <i>Id.</i> Baughan teaches that the projecting discs 17 are secured to the tube 15 but the discs 17 are not attached to the sleeve 24, as they merely contact the sleeve or the sleeve rests upon the discs. Baughan, 2:19-25, 2:51-62 Thus, Baughan teaches projecting discs connected to and protruding from one structure (the tube 15) but not attached to another structure (the sleeve 24).</p> <p>While Baughan teaches outward projecting discs, a PHOSITA using basic common sense, would modify the discs 17 for a tube-shaped embodiment to be projections for a flatter, non-tube embodiment. 3. Indeed, it was well known in the art how to make projections on a flat surface. Johnson, FIG. 3, 4:16-23 Johnson further teaches that the projections are molded projections, which means the projections are integral with an interior surface on which they were formed. <i>Id.</i> Even so, making something integral is an obvious design choice. MPEP 2144.04(V)(B).</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                 | <p>Applying the simple teachings of Baughan or Johnson to Park, it would have been obvious to include a plurality of spaced-apart projections formed on the posterior wall of Park to prevent collapsing of the posterior and anterior walls under suction at weak points of the mouth prop. A PHOSITA would have expected success because these simple mechanical structures ensure separation between two walls that would otherwise collapse under suction. Baughan, 3:43-48. Thus, a PHOSITA would have expected success in using spaced-apart projections to prevent walls from collapsing under suction. A PHOSITA would have further known that spaced-apart projections ensure that channels for sucking saliva and foreign substances remain between the spaced-apart projections, lest the purpose of Park's mouth prop be defeated. Modifying Park in view of Baughan and/or Johnson would involve nothing more than applying a known technique (anti-collapse structure) to a known device ready for improvement (the mouth prop 100 of Park) to yield predictable results (preventing collapse at weak parts of the mouth prop 100 under suction), or combining prior art elements (a mouth prop having an interior chamber) according to known methods (using spaced-apart projections to prevent collapse under suction) to yield predictable results (the projections would prevent collapse under suction and still allow for suction channels therebetween).</p> <p>The spaced-apart projections taught by Baughan could be formed on either the first wall or the second wall. A PHOSITA would know that it makes no difference which wall connects to the projections so long as the projections connect to one of the walls.</p> <p>Further, Black teaches transverse walls 348c spaced apart from each other to form channels 342 therebetween. <i>Id.</i>, 14:21-47. Black explains that these transverse walls form conduits for debris and fluid, "thereby allowing for simultaneous aspiration of debris and fluid from top (palate of mouth) to bottom (floor of mouth), and through the passageway, during dental procedures." <i>Id.</i>, 14:38-47. The transverse walls 348c are a bridge structure, as claimed. Indeed, the Examiner also found that Black taught the claimed bridge structure. <i>Id.</i></p> <p>More specifically, the transverse walls extend from an interior surface of the posterior flap 348a and extend up to the anterior flap 348b as a plurality of protrusions (Transverse walls shown dashed). <i>Id.</i>, 14:21-47; These transverse walls 348a extend from an interior surface of the anterior flap 348b and are integral to the anterior flap 348b. <i>Id.</i>, 14:25-30.</p> |

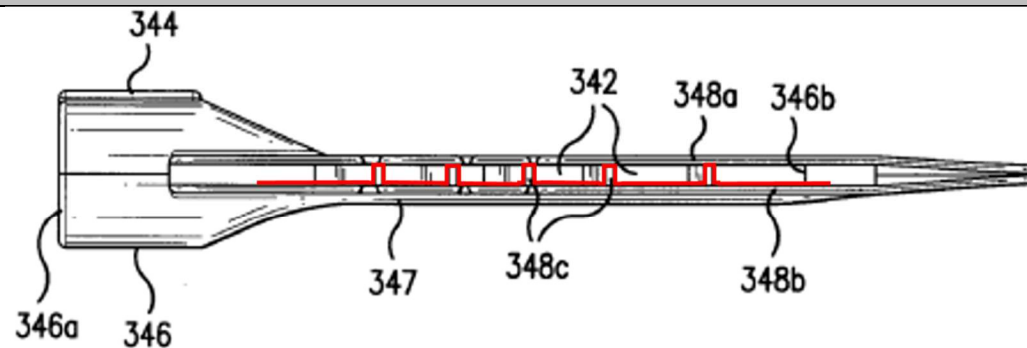


FIG. 23C

The transverse walls 348c extend toward the posterior layer 348a from the interior surface of the anterior flap 348b and connect to the posterior flap 348a. *Id.*, 14:21-63. The transverse walls 348c form crests in a wave shape and the channels 342 form troughs in a wave shape. Annotated FIG. 23C shown below illustrates the square wave shape formed by the presence or absence of the transverse walls.

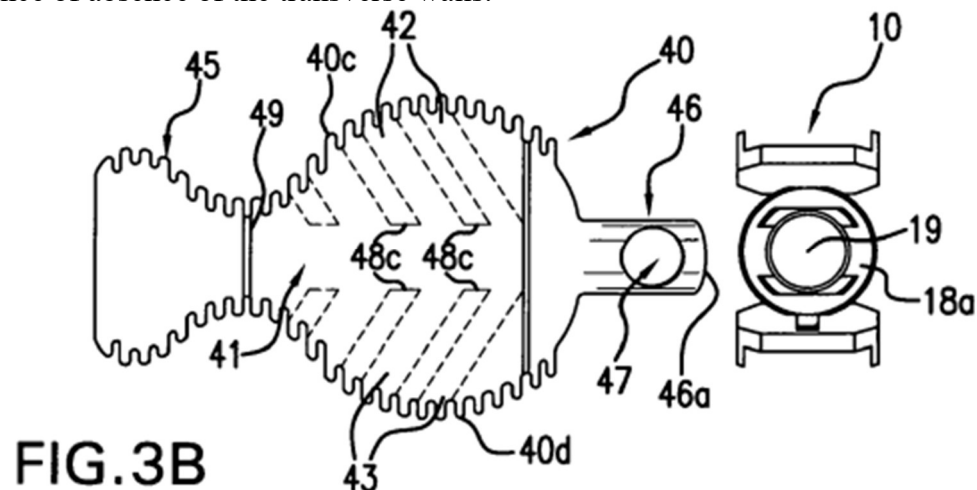
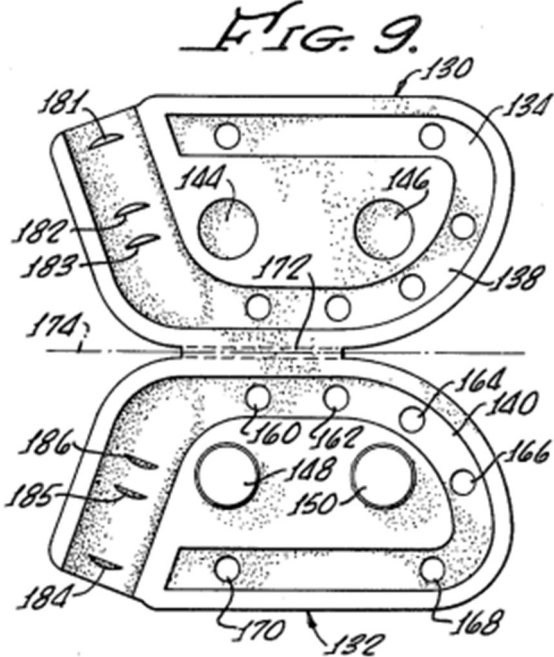


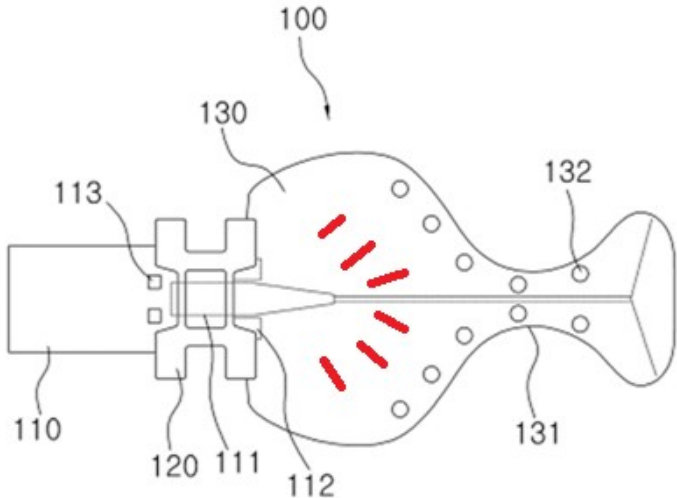
FIG. 3B

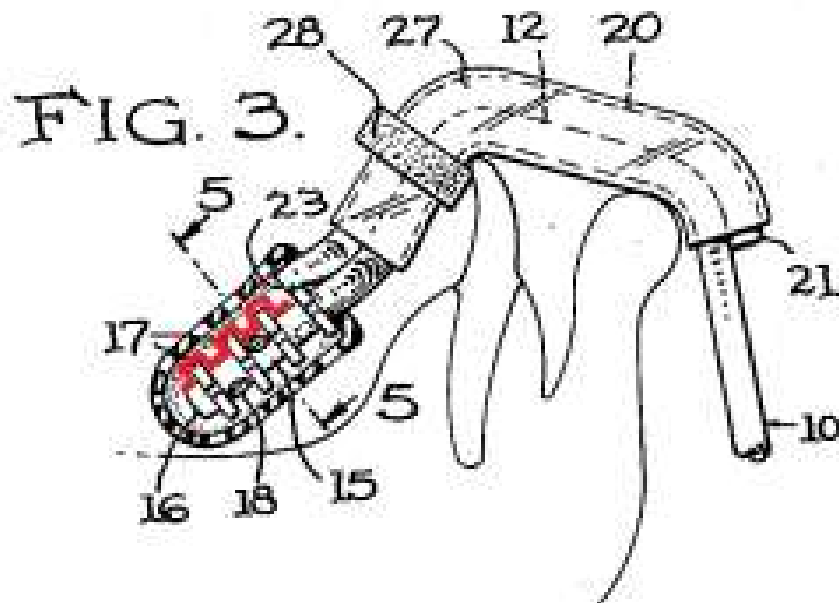
FIG. 3B also illustrates the wave shape from a top-view.

Elements 42 and 43 illustrate the channels, or troughs, and element 48c illustrates the crests. While FIG. 3B is directed to a different embodiment than the embodiment shown in FIGs. 23A-C, Black explains that “the tongue shield aspirator 340 includes features that are similar to those described above with the tongue shield aspirators 40, 240 shown in FIGs. 3, 4.” *Id.*, 11:55-60, 14:2-5. Moreover, the embodiment of FIG. 23 also includes transverse walls and channels. *Id.*, 14:21-47. Thus, FIG. 3B further informs the structure of the tongue shield aspirator 340.

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|                 | <p>Nevertheless, to the extent obviousness is required here, combining features between the embodiments within the same reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. While this feature seemingly was found to be the point of novelty, Ascentcare notes that during prosecution of the parent application, the same Examiner found that limitation 19(e) was taught by Black.</p> <p>Likewise, AirBug also discloses the same bridge structures:</p> <div> <p>Bridge structure connecting first and second wall</p> </div> <p>To the extent that Solmetex contends that Black and AirBug do not teach that the “bridge structure is not attached to the first wall,” such a modification would have been obvious to a PHOSITA. For example, it would have been obvious to a PHOSITA to disconnect the bridge structure from one of the walls such that the internal portions of the mouthpiece would be easier to clean, or to increase the flexibility of the mouthpiece. Specifically, to the</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                 | <p>extent that Park incorporated the bridge structure of Black or AirBug without separating the bridge structures from one of the walls, the mouthpiece would not be cleanable because there would be isolated pockets that would be inaccessible from the outside.</p> <p>Indeed, Johnson explicitly discloses bridge structures that may be disconnected from each wall simply by opening the mouthpiece.</p>  <p>Further, the MPEP provides that modifying something to be “separable” is a common practice, and are considered routine changes. MPEP § 2144.04V.C. (citing <i>In reDulberg</i>, 289 F.2d 522, 523 (CCPA 1961).</p> <p>Accordingly, Park in view of one or two of Black, AirBug, Baughan or Johnson would predictably result in multiple projections formed at the weakest point(s) of Park 111. See annotated Park, FIG. 3 below.</p> |

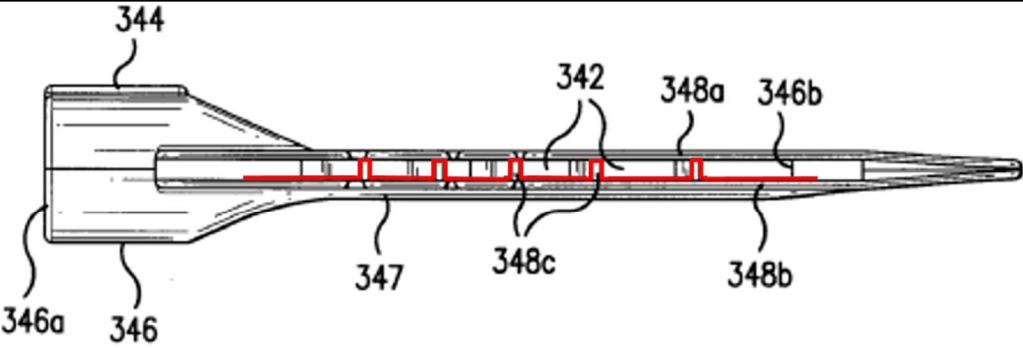
| The '970 Patent                                                                                                                                                                                               | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                           |
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|                                                                                                                                                                                                               |  <p>A PHOSITA would know that the projections could be formed at any angle, but angling the projections/troughs toward the holes would create an efficient convergent flow. Black, 8:21-39</p> |
| <p>1[f] and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the second wall in a wave shape comprising one or more crests and one or more troughs, and</p> | <p>Baughan teaches that the spaced-apart discs result in a square wave shape having crests and troughs. Baughan, FIG. 3 (annotated below)</p>                                                                                                                                    |

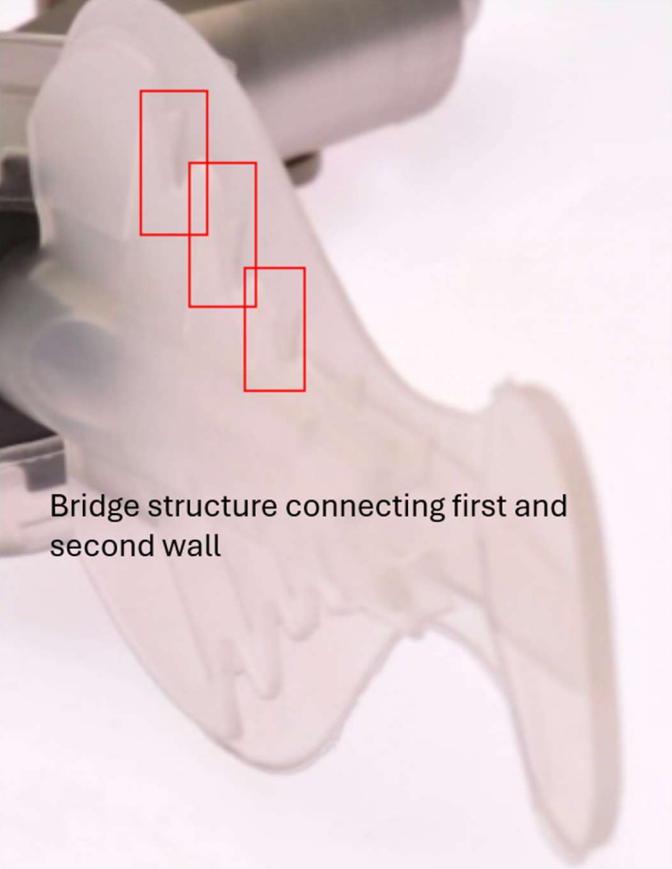


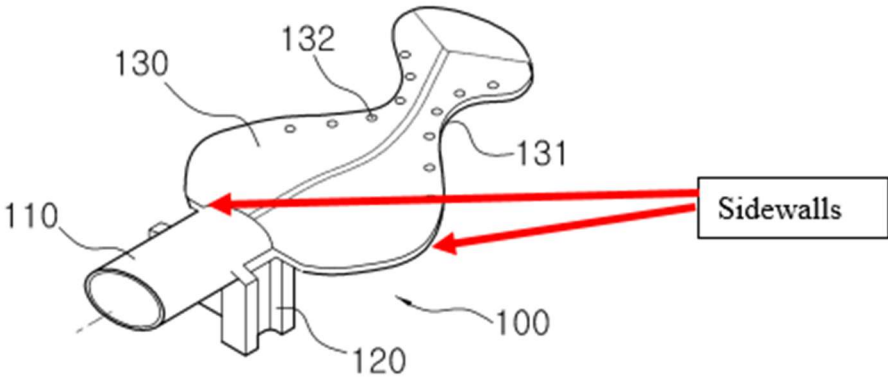
In fact, each individual disc 17 is formed in a wave shape with notches 19 formed in each disc so that saliva “will always be able to pass through.” Baughan, 3:40-43. In fact, the notches 19 formed in each disc are described in the same way as the bridge structure of the '970 Patent. Baughan, 3:40-43. As shown below, the notches 19 in the disc also form a square wave shape. Baughan, FIG. 5 (annotated)

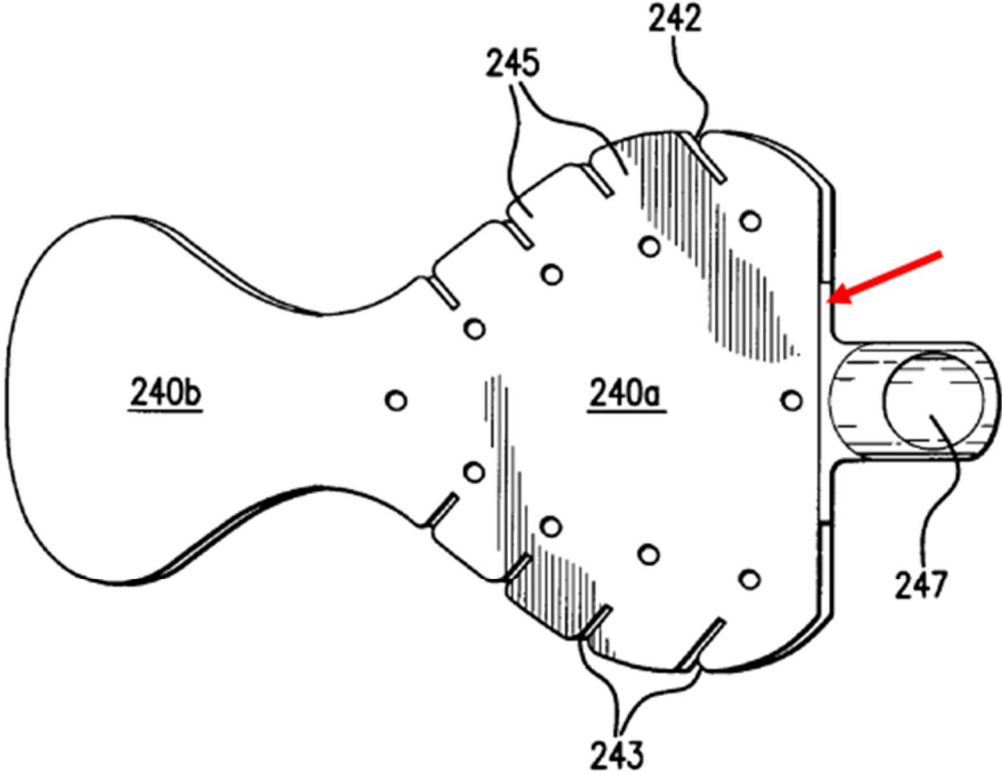


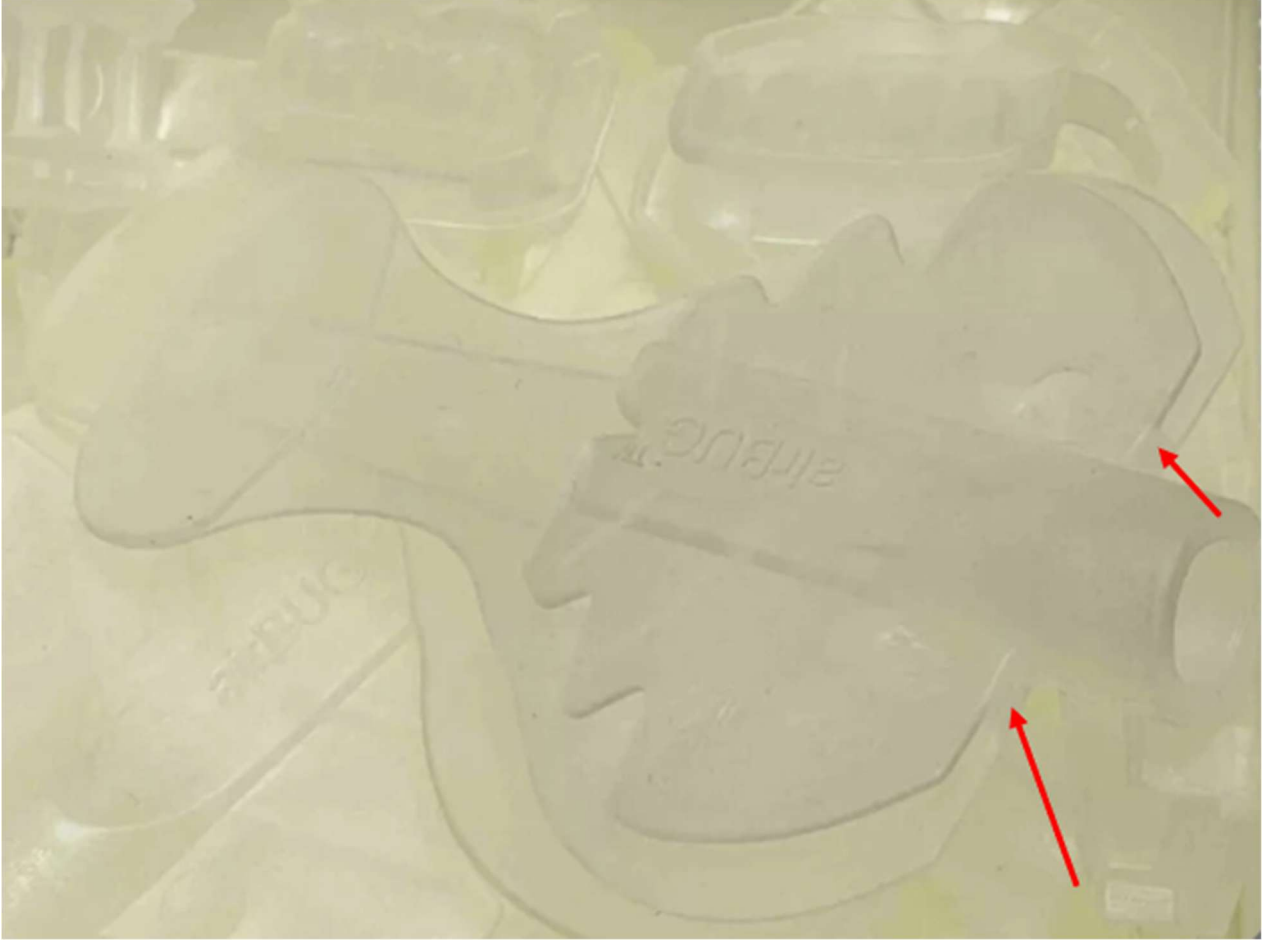
As discussed in 1[e], Black and AirBug teach the same bridge structure protrude from the interior surface of the second wall in a wave shape comprising one or more crests and one or more troughs:

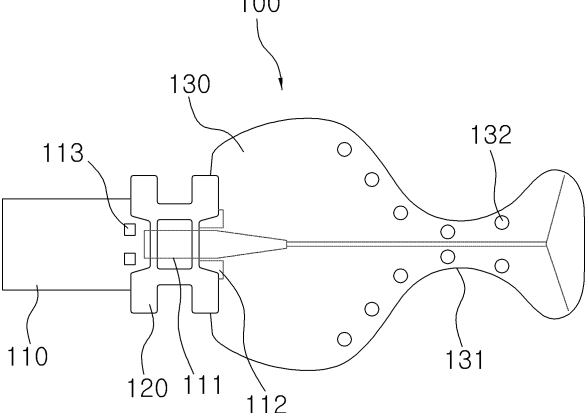
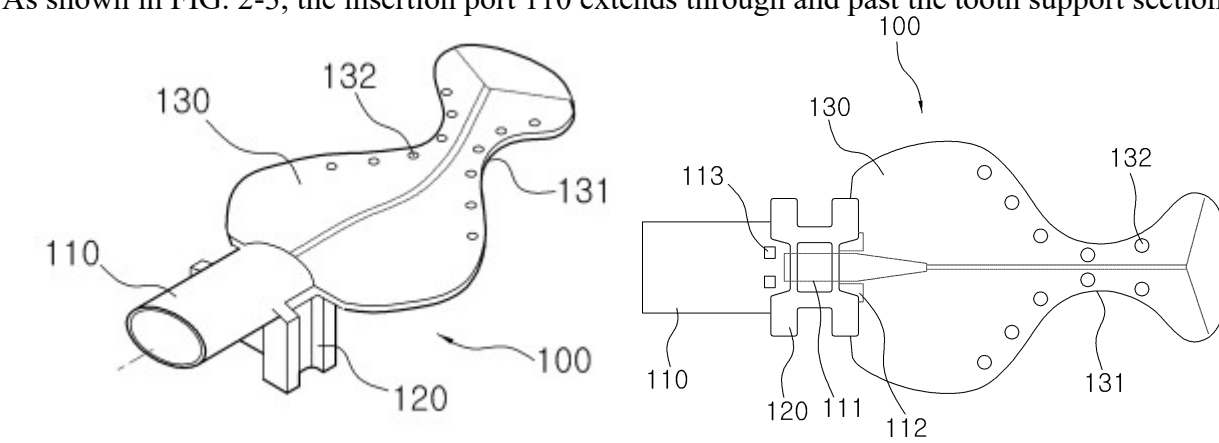
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                          |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p>FIG. 23C</p> |

| The '970 Patent                                                                                                                                                                                                                     | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                     |  <p>Bridge structure connecting first and second wall</p> <p>To the extent that Solmetex contends that these are not waves of crests and troughs, a PHOSITA would have found it obvious to incorporate such a design, as such a design with protrusions on the side walls were common in the prior art. <i>See e.g.</i> US4,024,642; CN102631180.</p> |
| <p>1[g] a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;</p> | <p>The tongue retractor 130 of Park has a sidewall connecting the anterior wall and the posterior wall. Park, FIG. 2</p>                                                                                                                                                                                                                                                                                                                                              |

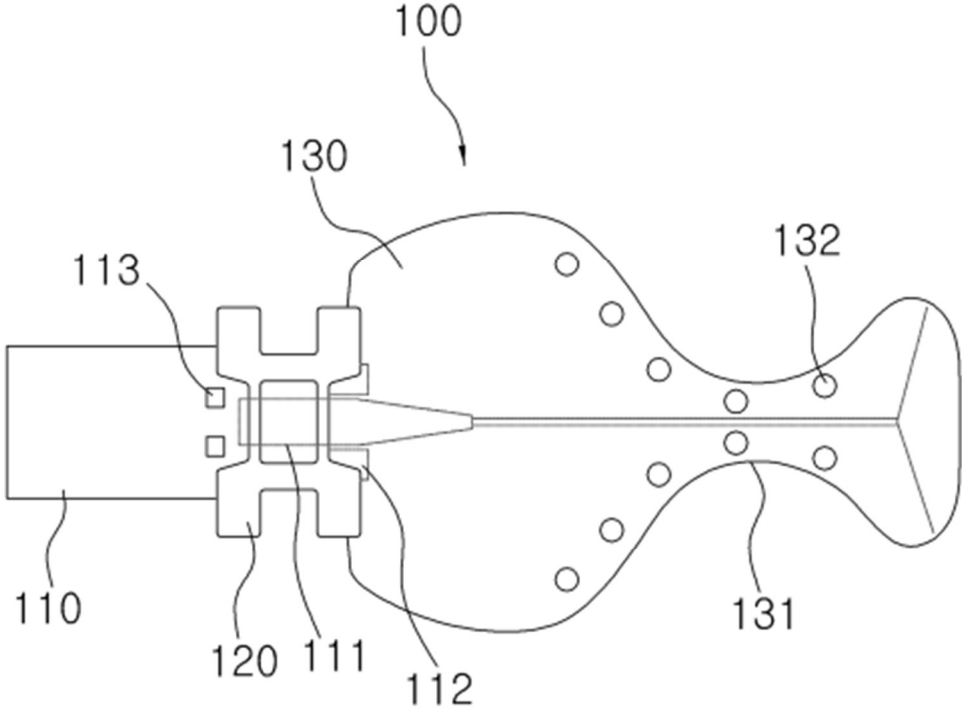
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                    |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p>To the extent that Solmetex disagrees, Black and AirBug teach the connecting wall:</p> |

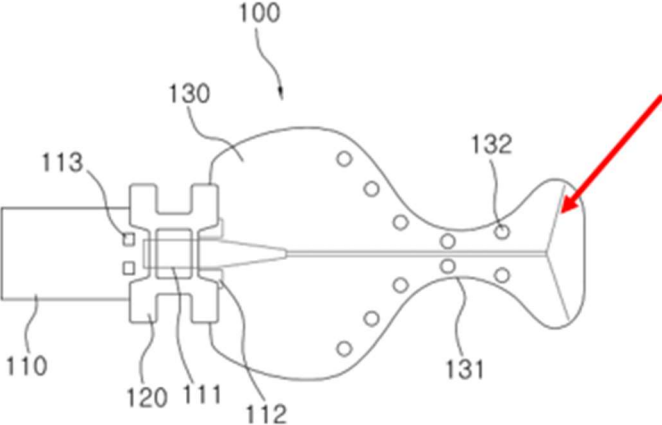
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                  |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p><b>FIG. 4C</b></p> |

| The '970 Patent                                                                                                                                                                                                                                                 | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p>1[h] a suction connector extending from the first end of the main body portion and integral to the main body portion, the suction connector including a cavity extending longitudinally from the main body portion, the cavity in communication with the</p> | <p>Park teaches an insertion port 110 that suctions foreign materials and connects to a vacuum source. Park ¶¶ 26-28, 43 The insertion port 110 suctions through the suction ports 112 and through the holes 132 via the inner chamber, and the suction ports 112 connect the inner chamber to the insertion port. <i>Id.</i> Park discloses the insertion port 110 as hollow, thus teaching a suction connector that includes a cavity extending longitudinally from the main body portion and in communication with the interior chamber of the tongue retractor 130. Park ¶¶ 26-28 Park shows this hollow insertion port as having a cavity extending from the opening to the suction ports 112. Park, FIG. 2-3.</p> <p>Park shows that the insertion port 110 extends from a first end of the mouth prop 100. Park, FIG. 3.</p> |

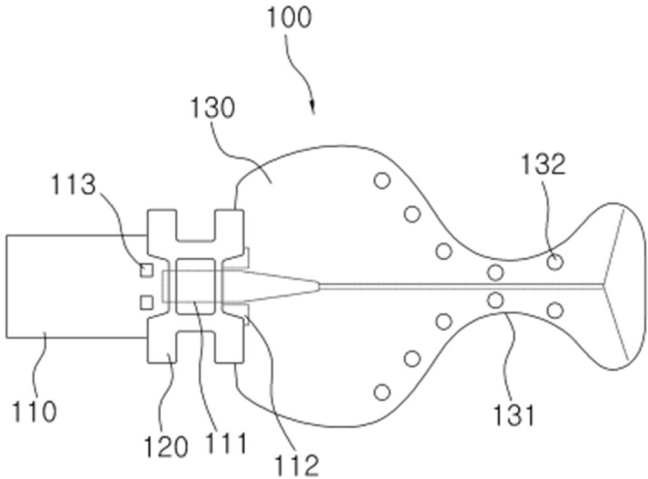
| The '970 Patent                                                                                                                                                                                                                                                 | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>interior space of the pocket and extending from a first opening of the suction connector at the first end of the main body portion and through a length of the suction connector towards a suction port opening opposite from the main body portion; and</p> |  <p>Park further teaches that the mouth prop 100 is formed of one piece. Park, ¶ 32 Thus, the insertion port 110 is integral with the tongue retractor. <i>Id.</i>; MPEP 2144.04(V)(B).</p>                                                                                               |
| <p>1[i] a mouth prop molded in one piece, and wherein the suction connector extends through and past the mouth prop.</p>                                                                                                                                        | <p>Park teaches a tooth support section 120, which is a mouth prop, formed into one piece with the rest of the mouth prop 100. Black, ¶ 29, 32, 54, Abstract, FIG. 1-3.</p> <p>As shown in FIG. 2-3, the insertion port 110 extends through and past the tooth support section 120.</p>  |

| The '970 Patent                                                                                                                                                                                        | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p>9 The mouthpiece of claim 1, wherein the suction connector comprises a cutout corresponding to a protrusion on a vacuum adapter for an interlocking fit.</p>                                        | <div> </div> <p>Park teaches a projection hole (cutout) 113 that receives a locking projection 211 formed on the adapter 200, thereby teaching an interlocking fit. Black, ¶ 35 Park teaches that these corresponding features prevent the mouth prop 100 from easily coming off the adapter 200. <i>Id.</i> Park shows that the projection hole (cutout) 113 is formed on the insertion port 110. Park, FIG. 3.</p> |
| <p>10 The mouthpiece of claim 1, wherein the suction connector connects the interior of the pocket to a vacuum source, wherein activation of the vacuum source provides suction of fluids from the</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| The '970 Patent                                                                                                                                     | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| interior of the pocket toward the vacuum source.                                                                                                    |  <p>Park teaches an insertion port 110 that suctions foreign materials and connects to a vacuum source. Park ¶¶ 26-28 The insertion port 110 suctions through the suction ports 112 and through the holes 132 via the inner chamber. <i>Id.</i></p> |
| 11 The mouthpiece of claim 1, wherein at least one of the first wall, the second wall, or the connecting wall comprise a plurality of perforations. | Park shows that the holes 132 are placed on both the front wall and the back wall. Park, ¶ 31, FIG. 2-3                                                                                                                                                                                                                               |
| 12 The mouthpiece of claim 11, wherein activation of a vacuum source associated with suction connector extending from the first end of              | Park teaches an insertion port 110 that suctions foreign materials and connects to a vacuum source. Park ¶¶ 26-28, 42-43 The insertion port 110 suctions through the suction ports 112 and through the holes 132 via the inner chamber. <i>Id.</i>                                                                                    |

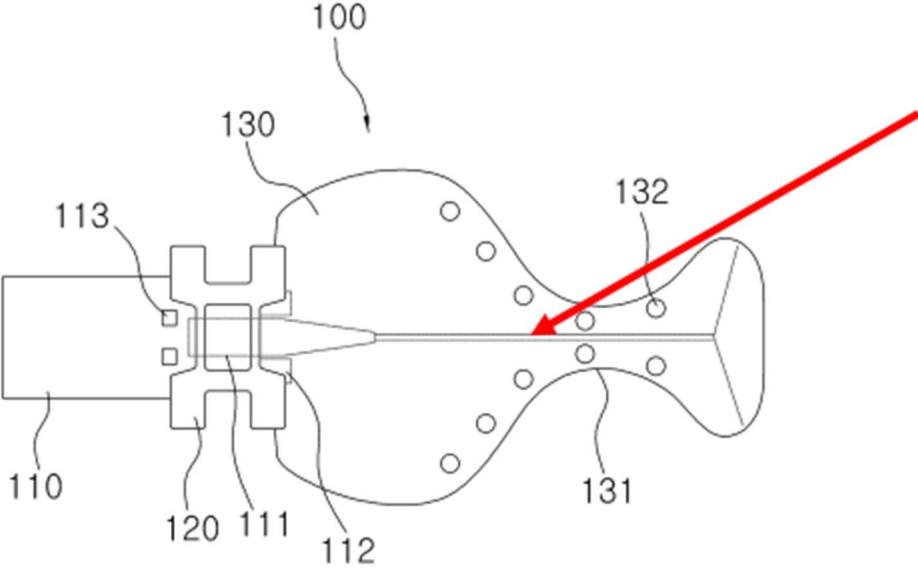
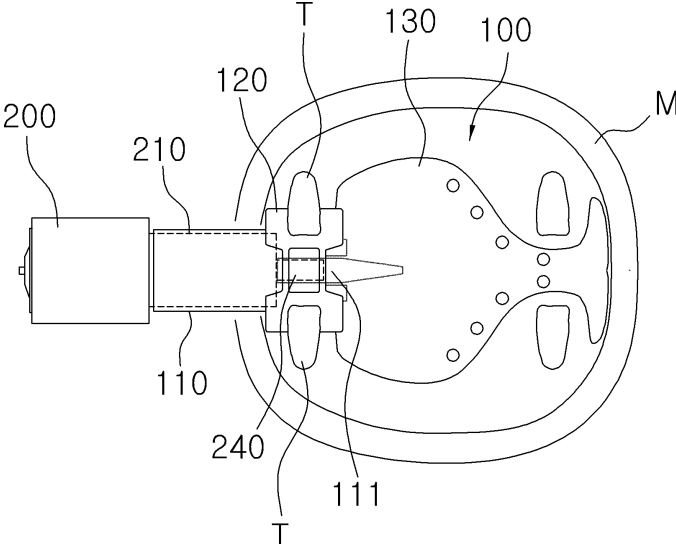
| The '970 Patent                                                                                                                                                                                                                                        | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>the main body portion draws fluids from an exterior of the main body portion through one or more of the plurality of perforations into the interior space of the pocket of the main body portion.</p>                                               |                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>13 The mouthpiece of claim 1, further comprising a cheek retractor portion connected to the main body portion and having a surface that applies pressure when bent, wherein the pressure is based on resilience of the cheek retractor portion.</p> | <p>Park teaches that the cheek retractor portion keeps tissue away from an area of work when bent. Black, ¶ 31.</p>  <p>Park further teaches that the mouth prop comprises a flexible material. Park, ¶ 32. Thus, Park teaches that the cheek retractor's pressure is based on the mouth prop material's (silicone) resilience.</p> |
| <p>15 The mouthpiece of claim 1, wherein the main body portion is formed by injection-molding as one piece.</p>                                                                                                                                        | <p>Park teaches a mouth prop formed as one piece. Park, ¶ 32 A PHOSITA would know that forming silicone is commonly performed using injection molding.</p>                                                                                                                                                                                                                                                            |
| <p>16 The mouthpiece of claim 1, wherein a material that forms the main body portion is a flexible, translucent, high heat-resistant, autoclavable silicone-based material.</p>                                                                        | <p>Park teaches a mouth prop formed of silicone that is reusable after sterilization. Park, ¶ 32, Abstract. Park further teaches the mouth prop 100 as translucent. Park, ¶ 49</p> <p>Park further teaches a mouthpiece that is flexible. Further, a mouthpiece that is reusable after sterilization would be understood by a PHOSITA to mean high heat resistant and autoclavable.</p>                               |
| <p>18[a] A mouthpiece comprising:</p>                                                                                                                                                                                                                  | <p>To the extent the preamble is limiting, each of the references discussed herein is a mouthpiece.</p>                                                                                                                                                                                                                                                                                                               |

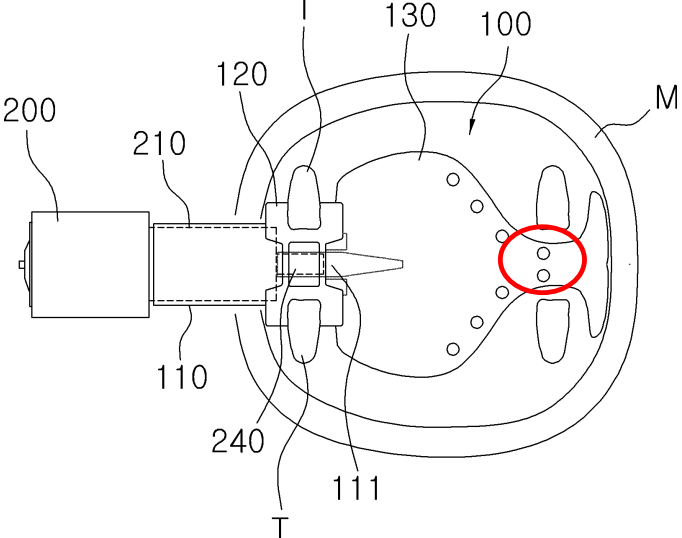
| The '970 Patent                                                                                                                                                                                       | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>18[b] a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by:</p> | <p>Park discloses a tongue retractor 130, which is a main body. Park, ¶ 26. As shown in FIG. 2 or 3, Park shows that the tongue retractor 130 has a wide portion and a narrower, concave portion 131 and then a wide cheek retractor at the end of the tongue retractor 130. <i>Id.</i> Thus, Park shows a main body that extends from a first end to a second end. <i>Id.</i></p> <p>The tongue retractor 130 is configured as a pocket defining an interior space. Park, ¶¶ 26-27 In fact, the tongue retractor 130 is a four-sided body with an anterior wall, a posterior wall, and two sidewalls that together enclose an interior open space where suction occurs. Park, FIG. 2 1-3 of Park. FIG. 2 even illustrates the sidewalls extending into the insertion port 110, thereby clearly demonstrating their presence. Park illustrates a continuous sidewall around all edges of the tongue retractor 130, and that continuous edge extends onto the insertion port 110 and the tooth support section 120. <i>Id.</i> Thus, Park illustrates an isolation mouthpiece with sidewalls. Park, FIG. 2. As such, the interior space is sandwiched by an anterior wall and a posterior wall.</p> <p>The specification further supports this conclusion. As shown in FIG. 3, the mouth prop 100 includes two suction ports 112 formed in the hollow insertion port 110 and extending into the tongue retractor 130. Park, FIG. 3, ¶¶ 27-28 Park teaches that the insertion port 110 is hollow and only <i>one</i> end of the insertion port 110 is open. Park, ¶ 27-28. Park further teaches that the insertion port 110 has a central interior that includes a post fitting groove 111 and suction ports 112. <i>Id.</i> Because only one end of the insertion port 110 is open, Park teaches that the second end, where the suction ports 112 are formed (see Park, FIG. 2), is enclosed and extends into an interior space of the tongue retractor 130. Park, ¶ 26-31. Indeed, Park specifically teaches that the tongue retractor 130 extends from the insertion port 110. Park, ¶ 26.</p> <p>The suction ports 112 only extend partially into the tongue retractor 130, and the suction ports 112 do not extend to the through-holes 132 as a dedicated channel. Park, ¶ 26-31, FIG. 3 Additionally, Park fails to teach that any suction can occur through the sides of the mouth prop 100. Thus, a PHOSITA would understand that Park's mouth prop 100 has an interior open space that fluidly connects the holes 132 to the suction ports 112. Park, ¶¶ 30-31, FIG. 2 If the mouth prop 100 did not include an interior open space formed in the tongue retractor 130, then the holes 132 would serve no purpose, and the suction ports 112 would aspirate nothing. The existence of an interior chamber of the mouth prop is necessary to fluidly connect the suction ports 112 and the holes 132; otherwise Park would be inoperable to perform "suction of foreign substances in the oral cavity." Park, ¶ 10.</p> <p>Finally, Park depicts the suction ports 112 (and the socket 111) using a line of a lighter shade than the edges of the tongue retractor 130. Park, FIG. 3 This is likely because the suction ports are only partially visible through clear silicone, but indicating that they extend into an internal chamber of the tongue retractor 130. Park, ¶32. These differences in shading are clearer on a computer screen than a printed copy.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                 |  <p>Indeed, a PHOSITA would know that a mouth prop having through holes 132 that do not fluidly connect to the suction ports 112 would allow debris and fluid to pass through the through holes 132 and down a patient's throat, something a PHOSITA would know to avoid. If the suction connector 112 was not fluidly connected to the holes 132 through the tongue retractor 130 of the mouth prop 100, the suction port 112 would serve no purpose or be extremely ineffective, and a patient might choke or experience severe discomfort by the debris, fluid, etc. passing through the holes 132 during a dental procedure.</p> <p>Moreover, a PHOSITA would know that a dentist would position the mouth prop 100 in a patient's mouth such that the concave area 131 would wrap behind teeth on the side of the mouth where a dentist would operate. Park, ¶ 47, 31. FIG. 6 2. This is because the whale tale end, opposite the suction connector 112, retracts the patient's cheek near a dental operation. Park, ¶ 31. If the through-holes 132 were not fluidly connected to the suction ports 112 through the tongue retractor 130, then the suction ports 112 of the mouth prop 100 of Park would be positioned at the furthest possible location in the mouth from the dental operation. A PHOSITA would know that suction should occur as close as possible to the operating area to maximize capture of debris, fluids, and aerosols. <i>Id.</i> The farther away suction is positioned from generated fluid, debris, blood, etc., the less powerful it becomes; meaning the suction would not effectively aspirate unwanted fluids and debris in the mouth. <i>Id.</i> In other words, a PHOSITA would understand that the mouth prop of Park fluidly connects the suction ports 112 to the holes 132 through an inner chamber of the tongue retractor 130 to guide and channel the suction applied through the suction ports. A PHOSITA would understand that the only logical reason a mouth prop configured to expel debris and fluid (Park, ¶ 28, 9) would include through holes 132 is to ensure that suction occurs through the holes 132 via a fluid connection</p> |

| The '970 Patent                                                                                                                                                                                                                                                                                                                                                                                                                 | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>with the suction ports 112, especially considering the holes 132 align with the location where a dental operation occurs. The only way the holes 132 would have an efficient fluid connection with the suction ports 112 is if the mouth prop 100 included an inner chamber through the mouth prop. <i>Id.</i> Thus, Park, at worst, implicitly teaches a four-sided mouth prop formed as a pocket with an inner chamber formed between the four walls. <i>Id.</i></p> <p>Thus, Park teaches a tongue retractor 130 configured as a pocket extending from the insertion port 110 to the cheek retractor near the concave portion 131 and enclosing an interior open space formed in the tongue retractor 130 between the suction ports 112 and the holes 132. <i>Id.</i></p>                                                                                                                                                                                                                                                                                      |
| 18[c] a first wall extending from the first end to the second end, the first wall having an interior surface facing the interior space of the pocket, and                                                                                                                                                                                                                                                                       | See limitation 18[b].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 18[d] a second wall located at a distance from to the first wall and extending from the first end to the second end, the second wall having an interior surface facing the interior surface of the first wall,                                                                                                                                                                                                                  | See limitations 1[b] and 1[d].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 18[e] the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from the interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall, and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the | <p>Park mentions that “common features,” such as anti-collapse structures, are “omitted.” Park, ¶ 22 However, a PHOSITA would understand that when suction is applied through the suction port 112, the first wall and the second wall are likely to collapse under the suction force. Baughan, 3:46-48 This collapsing would occur because Park teaches that the mouth prop comprises a flexible material, such as silicone. Park, ¶32, 34. The sidewalls and the insertion port 110 would help resist this collapsing force, but a PHOSITA would understand that additional anti-collapsing structure would assist at the weakest areas of the tongue retractor 130.</p> <p>More specifically, an area of the mouth prop furthest from a rigid structure, such as the sidewall, the socket 111, or the insertion port 110 would be most likely to collapse under suction. A PHOSITA would understand that these areas, depicted below, are the most likely areas to collapse under suction due to their location and distance from rigid structure. <i>Id.</i></p> |

| The '970 Patent                                                                               | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>second wall in a wave shape comprising one or more crests and one or more troughs, and</p> | <div> </div> <p>If these areas collapse under suction, suction power would be significantly reduced or blocked entirely. Thus, a PHOSITA would have been motivated to add anti-collapsing structure to prevent collapse. <i>Id.</i></p> <p>Moreover, it is unclear whether the mouth prop 100 includes a spine or other rigid structure running through the middle of the mouth prop 100. FIG. 3 of Park suggest that something is running from the socket 111 toward the cheek retractor end of the mouth prop. Park, FIG. 3.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                 |  <p>However, this line is not shown in FIG. 6.</p>  <p>Thus, the line shown in FIG. 3 may not provide any rigidity or anti-collapse features at all and may only assist in guiding light from the light guide 240. Park, ¶ 39 Thus, the weakest part of the mouth prop may actually be the exact center of the mouth prop (see annotated FIG. 6 below).</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p>Regardless, a PHOSITA would know that Park is weak in at least one area and may collapse or restrict fluid communication due to wall collapse caused by suction due to the flexible material comprising the mouth prop 100. Park, ¶ 32 To prevent collapse or restriction, a PHOSITA would have been motivated to add mechanical elements that prevent collapse under suction.</p> <p>Baughan teaches such a mechanical element that prevents collapse under suction. Baughan, 3:43-48. Specifically, Baughan teaches three projecting discs 17 that prevent collapse under suction when a sleeve is inserted over a tube 15. Baughan, 2:19-25, 2:51-55, 3:43-48. The discs 17 project outward from the tube, span the distance between the tube and the sleeve, and engage the sleeve. <i>Id.</i> These rigid structures, spaced apart from each other, prevent the sleeve from collapsing under suction. <i>Id.</i> Baughan teaches that the projecting discs 17 are secured to the tube 15 but the discs 17 are not attached to the sleeve 24, as they merely contact the sleeve or the sleeve rests upon the discs. Baughan, 2:19-25, 2:51-62 Thus, Baughan teaches projecting discs connected to and protruding from one structure (the tube 15) but not attached to another structure (the sleeve 24).</p> <p>While Baughan teaches outward projecting discs, a PHOSITA using basic common sense, would modify the discs 17 for a tube-shaped embodiment to be projections for a flatter, non-tube embodiment. 3. Indeed, it was well known in the art how to make projections on a flat surface. Johnson, FIG. 3, 4:16-23 Johnson further teaches that the projections are molded projections, which means the projections are integral with an interior surface on which they were formed. <i>Id.</i> Even so, making something integral is an obvious design choice. MPEP 2144.04(V)(B).</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>Applying the simple teachings of Baughan or Johnson to Park, it would have been obvious to include a plurality of spaced-apart projections formed on the posterior wall of Park to prevent collapsing of the posterior and anterior walls under suction at weak points of the mouth prop. A PHOSITA would have expected success because these simple mechanical structures ensure separation between two walls that would otherwise collapse under suction. Baughan, 3:43-48. Thus, a PHOSITA would have expected success in using spaced-apart projections to prevent walls from collapsing under suction. A PHOSITA would have further known that spaced-apart projections ensure that channels for sucking saliva and foreign substances remain between the spaced-apart projections, lest the purpose of Park's mouth prop be defeated. Modifying Park in view of Baughan and/or Johnson would involve nothing more than applying a known technique (anti-collapse structure) to a known device ready for improvement (the mouth prop 100 of Park) to yield predictable results (preventing collapse at weak parts of the mouth prop 100 under suction), or combining prior art elements (a mouth prop having an interior chamber) according to known methods (using spaced-apart projections to prevent collapse under suction) to yield predictable results (the projections would prevent collapse under suction and still allow for suction channels therebetween).</p> <p>The spaced-apart projections taught by Baughan could be formed on either the first wall or the second wall. A PHOSITA would know that it makes no difference which wall connects to the projections so long as the projections connect to one of the walls.</p> <p>Further, Black teaches transverse walls 348c spaced apart from each other to form channels 342 therebetween. <i>Id.</i>, 14:21-47. Black explains that these transverse walls form conduits for debris and fluid, "thereby allowing for simultaneous aspiration of debris and fluid from top (palate of mouth) to bottom (floor of mouth), and through the passageway, during dental procedures." <i>Id.</i>, 14:38-47. The transverse walls 348c are a bridge structure, as claimed. Indeed, the Examiner also found that Black taught the claimed bridge structure. <i>Id.</i></p> <p>More specifically, the transverse walls extend from an interior surface of the posterior flap 348a and extend up to the anterior flap 348b as a plurality of protrusions (Transverse walls shown dashed). <i>Id.</i>, 14:21-47; These transverse walls 348a extend from an interior surface of the anterior flap 348b and are integral to the anterior flap 348b. <i>Id.</i>, 14:25-30.</p> |

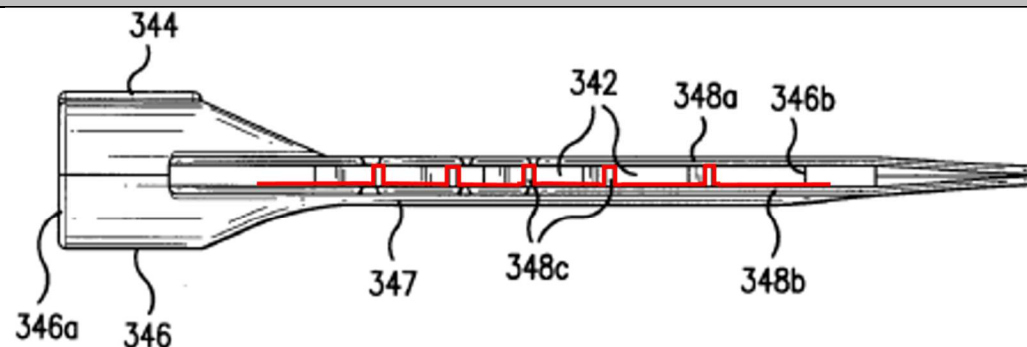


FIG. 23C

The transverse walls 348c extend toward the posterior layer 348a from the interior surface of the anterior flap 348b and connect to the posterior flap 348a. *Id.*, 14:21-63. The transverse walls 348c form crests in a wave shape and the channels 342 form troughs in a wave shape. Annotated FIG. 23C shown below illustrates the square wave shape formed by the presence or absence of the transverse walls.

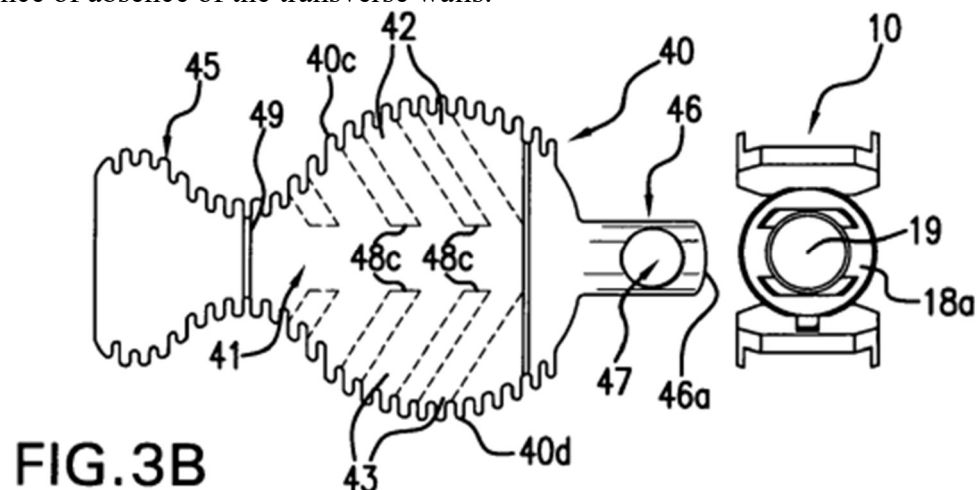
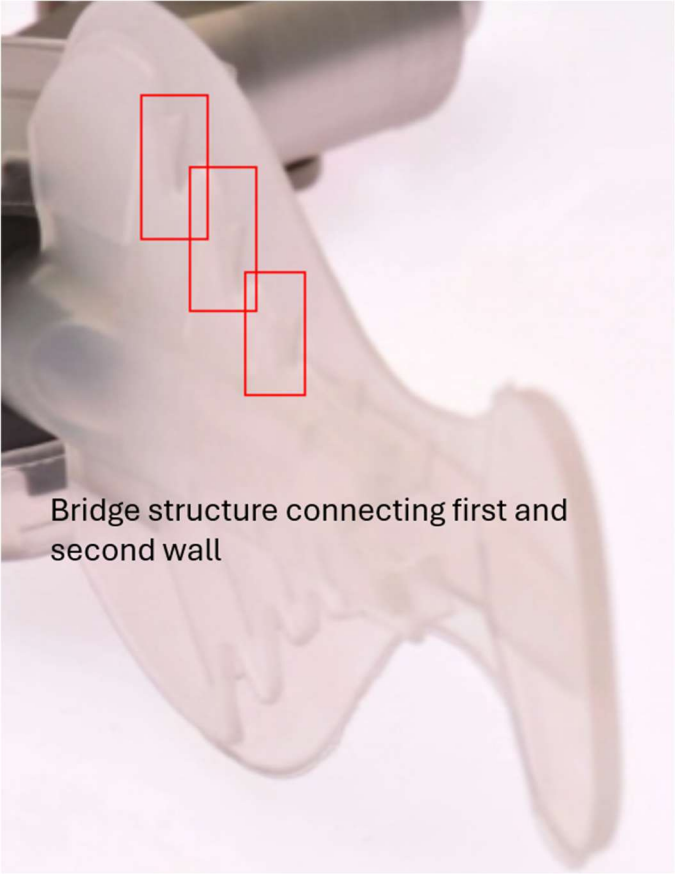
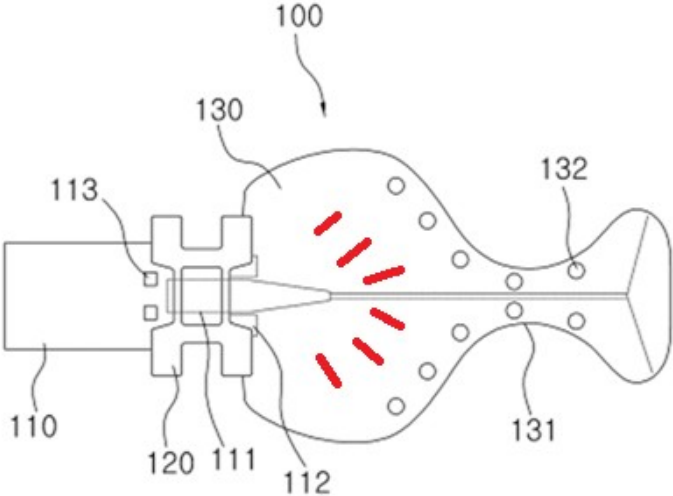


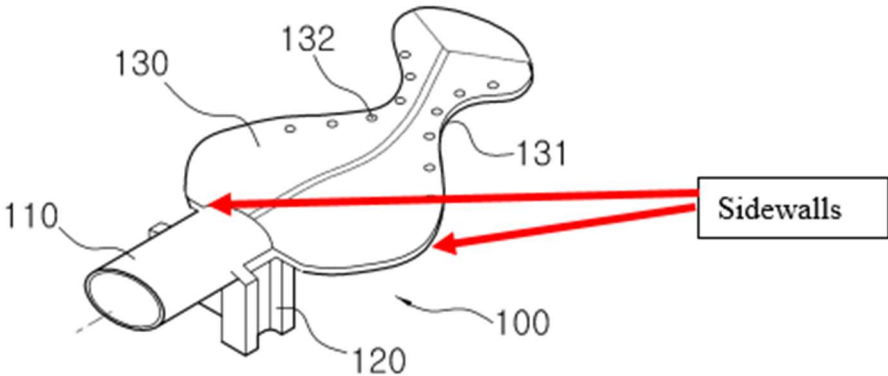
FIG. 3B

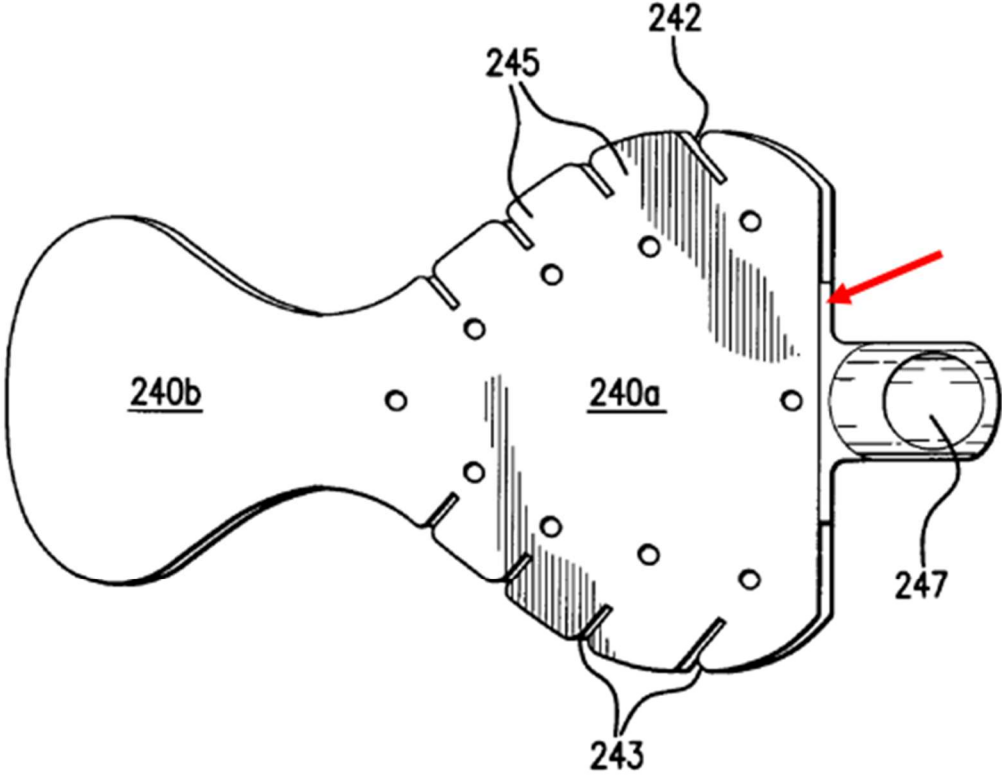
FIG. 3B also illustrates the wave shape from a top-view.

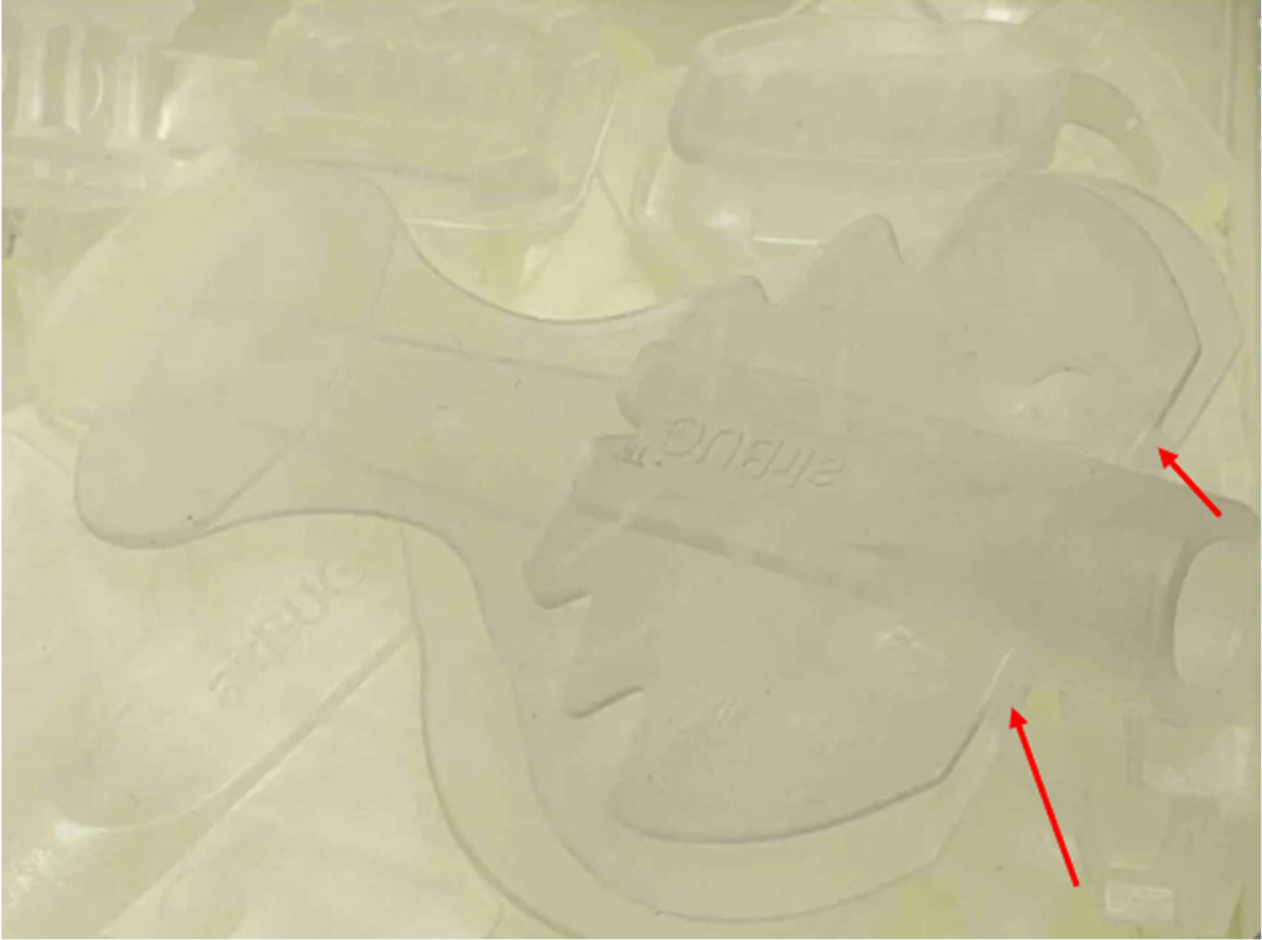
Elements 42 and 43 illustrate the channels, or troughs, and element 48c illustrates the crests. While FIG. 3B is directed to a different embodiment than the embodiment shown in FIGs. 23A-C, Black explains that “the tongue shield aspirator 340 includes features that are similar to those described above with the tongue shield aspirators 40, 240 shown in FIGs. 3, 4.” *Id.*, 11:55-60, 14:2-5. Moreover, the embodiment of FIG. 23 also includes transverse walls and channels. *Id.*, 14:21-47. Thus, FIG. 3B further informs the structure of the tongue shield aspirator 340.

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>Nevertheless, to the extent obviousness is required here, combining features between the embodiments within the same reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. While this feature seemingly was found to be the point of novelty, Ascentcare notes that during prosecution of the parent application, the same Examiner found that limitation 19(e) was taught by Black.</p> <p>Likewise, AirBug also discloses the same bridge structures:</p> <div>  <p>Bridge structure connecting first and second wall</p> </div> <p>To the extent that Solmetex contends that Black and AirBug do not teach that the “bridge structure is not attached to the first wall,” such a modification would have been obvious to a PHOSITA. For example, it would have been obvious to a PHOSITA to disconnect the bridge structure from one of the walls such that the internal portions of the mouthpiece would be easier to clean, or to increase the flexibility of the mouthpiece. Specifically, to the</p> |

| The '970 Patent                                                                                                                                                                                        | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                        | <p>extent that Park incorporated the bridge structure of Black or AirBug without separating the bridge structures from one of the walls, the mouthpiece would not be cleanable because there would be isolated pockets that would be inaccessible from the outside.</p> <p>Accordingly, Park in view of one or two of Black, AirBug, Baughan or Johnson would predictably result in multiple projections formed at the weakest point(s) of Park 111. <i>See</i> annotated Park, FIG. 3 below.</p>  <p>A PHOSITA would know that the projections could be formed at any angle, but angling the projections/troughs toward the holes would create an efficient convergent flow. Black, 8:21-39</p> <p>Further, the MPEP provides that modifying something to be “separable” is a common practice, and are considered routine changes. MPEP § 2144.04V.C. (citing <i>In reDulberg</i>, 289 F.2d 522, 523 (CCPA 1961).</p> |
| <p>18[f] a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;</p> | <p>The tongue retractor 130 of Park has a sidewall connecting the anterior wall and the posterior wall. Park, FIG. 2</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                    |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p>To the extent that Solmetex disagrees, Black and AirBug teach the connecting wall:</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                  |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p><b>FIG. 4C</b></p> |

| The '970 Patent                                                                                                                              | Exemplary Disclosures in the Prior Art                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                                                                                              |  |
| 18[g] a mouth prop molded in one piece and located at the first end of the main body portion; and                                            | <i>See limitation 1[i].</i>                                                         |
| 18[h] a suction connector integral with the main body portion and extending from the first end of the main body portion past the mouth prop, | <i>See limitation 1[h]</i>                                                          |

| The '970 Patent                                                                                         | Exemplary Disclosures in the Prior Art |
|---------------------------------------------------------------------------------------------------------|----------------------------------------|
| wherein the suction connector includes a cavity in communication with the interior space of the pocket. |                                        |

**EXHIBIT C-2 (Black or AirBug Mouthpiece in View the Skill of a PHOSITA or Baughan, Johnson, and the Skill of a PHOSITA)  
Invalidity Chart for U.S. Patent No. 11,589,970**

Ascentcare incorporates by reference the cover pleading to its Initial Invalidity Contentions. These Initial Invalidity Contentions, including these claim charts, are not an admission regarding claim scope or the accused products, and, in particular, that the accused products, including any current or past versions of these products, are covered by, or infringe the Asserted Claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by the Parties. In addition, these Initial Invalidity Contentions should not be taken as an admission that any of the asserted claims satisfy the requirements of 35 U.S.C. § 112. Where Ascentcare identifies portions of the prior art reference below, those identifications are intended to be exemplary in nature and are based on Ascentcare's investigation to-date. Ascentcare reserves the right to rely on un-cited portions of the reference to establish invalidity of the Asserted Claims.

Pursuant to pre-AIA 35 U.S.C. § 103 and as described in the cover pleading and shown below Black and Baughan were patented or printed in a publication more than one year prior to the filing date of the application, and therefore renders obvious, either alone or in combination with the other prior art, the knowledge of one of ordinary skill in the art, or one or more of the references identified in the cover pleading and/or one or more of the references from the other claim charts attached as exhibits to these contentions, U.S. Patent No. 11,589,970.

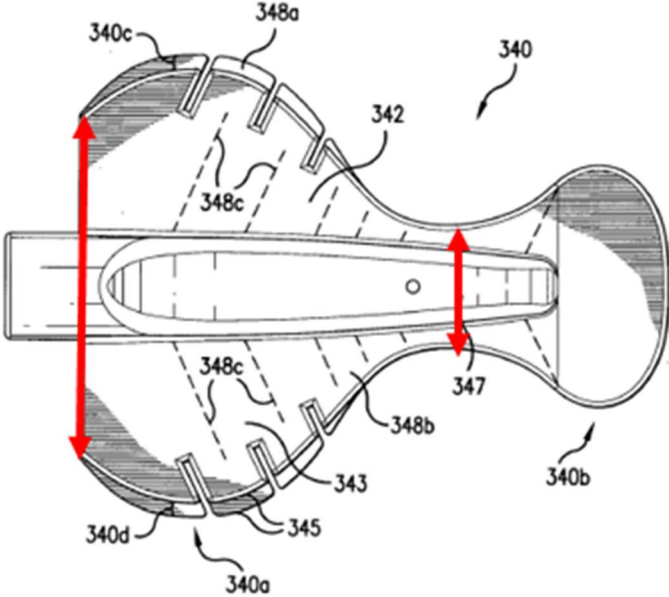
Pursuant to pre-AIA 35 U.S.C. § 103 and as described in the cover pleading and shown below, the AirBug Mouthpiece<sup>2</sup> was on sale or in public use more than one year prior to the priority date of the '970 Patent, and therefore anticipates and/or renders obvious, either alone or in combination with the other prior art, the knowledge of one of ordinary skill in the art, or one or more of the references identified in the cover pleading and/or one or more of the references from the other claim charts attached as exhibits to these contentions, U.S. Patent No. 11,589,970.

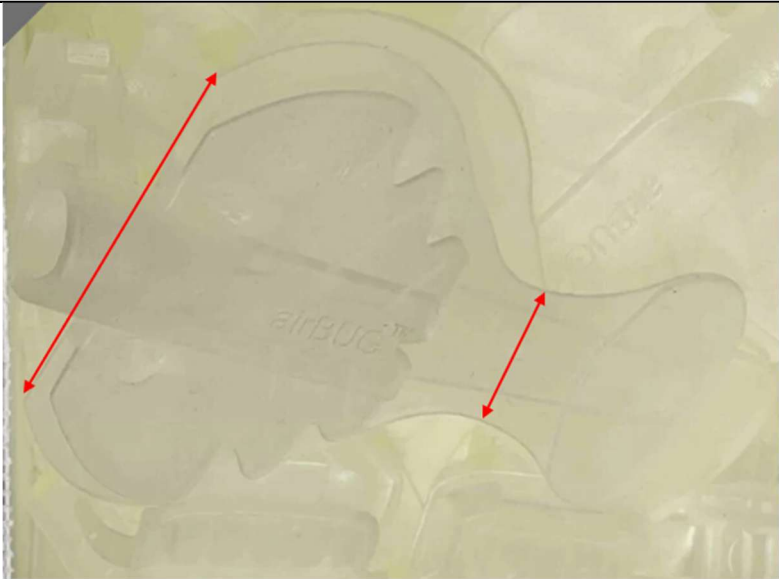
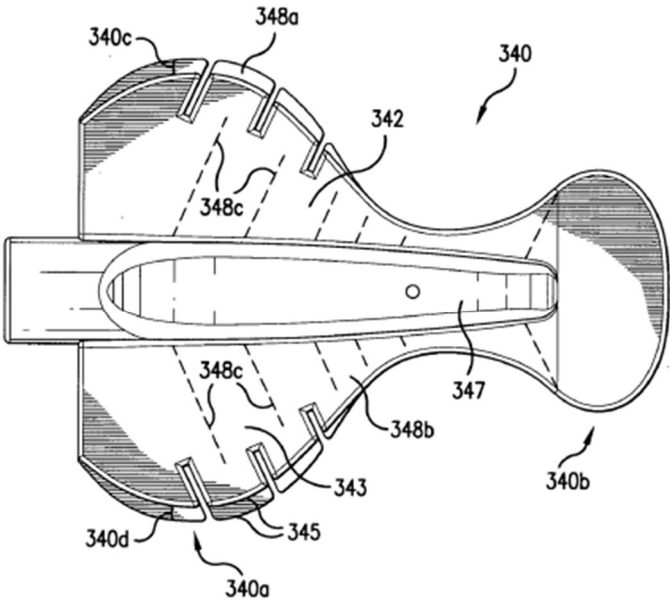
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<sup>2</sup> It is Ascentcare's understanding that several of the embodying products discussed herein may have multiple embodiments over the years. Discovery is ongoing, and Ascentcare has issued subpoenas seeking the prior art embodiments. To the extent that Ascentcare currently relies on more current embodiments of these mouthpieces, upon information and belief, the differences in those embodiments are minor and do not affect the invalidity analysis. Ascentcare reserves the right to amend these contentions as discovery progresses. It is Ascentcare's understanding, for example that the AirBug Mouthpiece is a product embodying Black, and thus, any of the references to Black likewise support the AirBug Mouthpiece, and vice versa.

| The '970 Patent                                                                                                                                                                                      | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1[a] A dental mouthpiece comprising:</p>                                                                                                                                                          | <p>To the extent the preamble is limiting, each of the references discussed herein is a dental mouthpiece.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>1[b] a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by:</p> | <div> </div> <p style="text-align: center;"><b>FIG. 23A</b></p> <p>Black discloses a tongue shield aspirator 340 configured to retract a patient's tongue. Black, 14:1-9. Specifically, Black discloses a first flap 340a connected to a second flap 340b, where the first flap 340a retracts a patient's tongue and the second flap 340b retracts a patient's cheek. <i>Id.</i>, 14:5-9.</p> <p>Black and further explains that the first flap 340a comprises a posterior layer 348a and an anterior layer 348b spaced apart from each other by transverse walls 348c. <i>Id.</i>, 14:25-30. The posterior layer 348a, the anterior layer 348b, and the transverse walls 348c at least partially enclose an interior space, such as channels 342, 343 and a longitudinal lumen that provide conduits for debris and fluid evacuation through the interior space. <i>Id.</i>, 14:21-63.</p> <p>The two layers 348a/b and the connecting wall at least partially enclose the channels 343, 342 and a longitudinal lumen, and thus, are a pocket under the positions taken by Solmetex in its Initial Infringement Contentions. Solmetex asserts that both VacuLux mouthpieces' open-sided mouthpiece is a "pocket."</p> |

| The '970 Patent                                       | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | <p>Further, the first flap 340a (main body) of Black comprises three walls – the posterior layer 348a, the anterior layer 348b, and a sidewall. These three walls at least partially enclose the interior space between the posterior layer 348a and the anterior layer 348b. Thus, according to Solmetex’s definition, Black’s main body is formed as a pocket.</p> <p>Under Solmetex’s construction of the term “pocket” and “partially enclosing an interior space” for infringement, the AirBug Mouthpiece also discloses a pocket at least partially enclosing an interior space:</p>  |
| 1[c] a first wall extending from the first end to the | Black teaches a tongue shield aspirator 340 having a first flap 340a that retracts a patient’s tongue and a second flap 340b that retracts a patient’s cheek. Black, 14:1-9. The first flap 340a is a main body. As shown, the first flap 340a                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| The '970 Patent                                                                                | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>second end, wherein the first wall is narrower at the second end than at the first end,</p> | <p>has a first end (left end in FIG. 23A below) and a second opposite end (right end in FIG. 23B below). Annotated FIG. 23A below shows that the second end is narrower than the first end.</p>  <p style="text-align: center;"><b>FIG. 23A</b></p> <p>AirBug Mouthpiece discloses the same:</p> |

| The '970 Patent                                                                                                                                                                                           | Exemplary Disclosures in the Prior Art                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                           |                                                      |
| <p>1[d] a second wall located at a distance from the first wall and extending from the first end to the second end, wherein the second wall is also narrower at the second end than at the first end,</p> |  <p style="text-align: center;"><b>FIG. 23A</b></p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>The main body 340a of Black includes an anterior layer 348b, which is a second wall. <i>Id.</i>, 14:25-30. As shown, the anterior layer 348b has a shape defined by one or more edges along one or more sides.</p> <p>The posterior layer 348a corresponds in shape to the anterior layer 348b, as shown in FIG. 23A. The anterior layer 348a matches the shape of the posterior layer 348a and is very similar in size. Thus, the anterior layer also is narrower at the second end than at the first end.</p> <p>AirBug discloses the same:</p>  |

| The '970 Patent                                                                                                                                                                                                                                                                                                           | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1[e] the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall,</p> | <div> </div> <p style="text-align: center;"><b>FIG. 23A</b></p> <p>Black teaches transverse walls 348c spaced apart from each other to form channels 342 therebetween. <i>Id.</i>, 14:21-47. Black explains that these transverse walls form conduits for debris and fluid, “thereby allowing for simultaneous aspiration of debris and fluid from top (palate of mouth) to bottom (floor of mouth), and through the passageway, during dental procedures.” <i>Id.</i>, 14:38-47. The transverse walls 348c are a bridge structure, as claimed. Indeed, the Examiner also found that Black taught the claimed bridge structure. <i>Id.</i></p> <p>More specifically, the transverse walls extend from an interior surface of the posterior flap 348a and extend up to the anterior flap 348b as a plurality of protrusions (Transverse walls shown dashed). <i>Id.</i>, 14:21-47; These transverse walls 348a extend from an interior surface of the anterior flap 348b and are integral to the anterior flap 348b. <i>Id.</i>, 14:25-30.</p> |

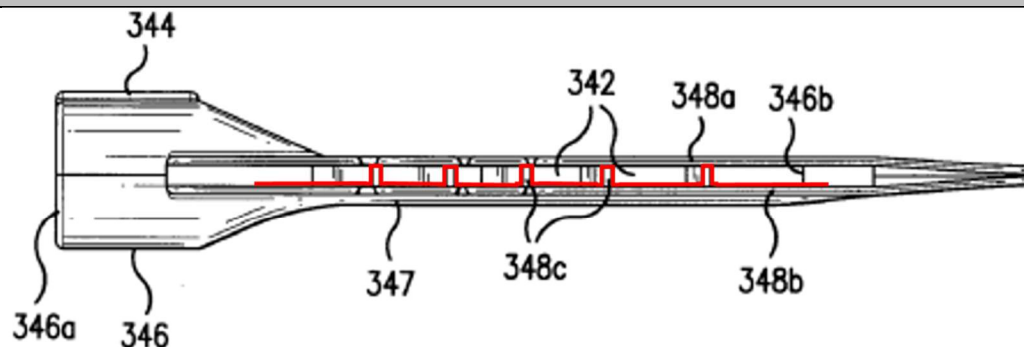


FIG. 23C

The transverse walls 348c extend toward the posterior layer 348a from the interior surface of the anterior flap 348b and connect to the posterior flap 348a. *Id.*, 14:21-63. The transverse walls 348c form crests in a wave shape and the channels 342 form troughs in a wave shape. Annotated FIG. 23C shown below illustrates the square wave shape formed by the presence or absence of the transverse walls.

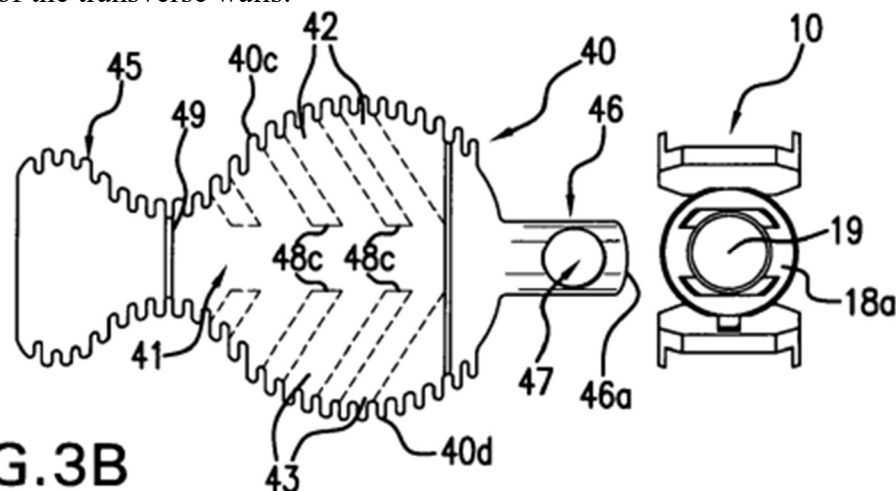
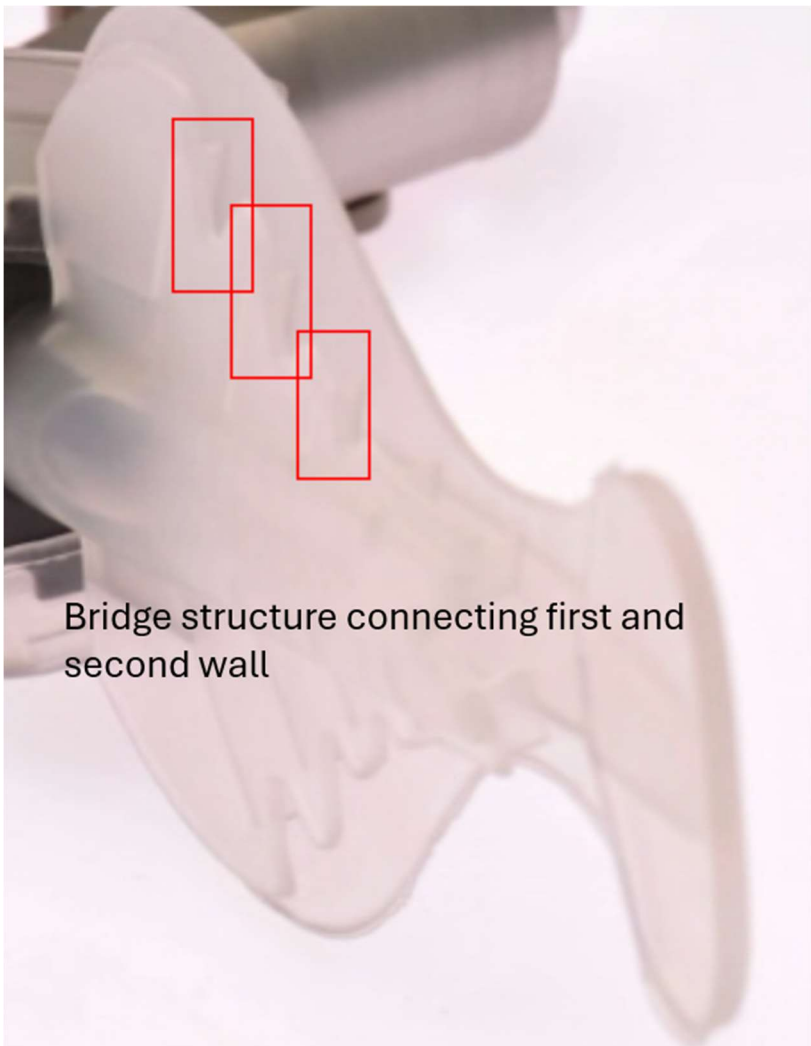


FIG. 3B

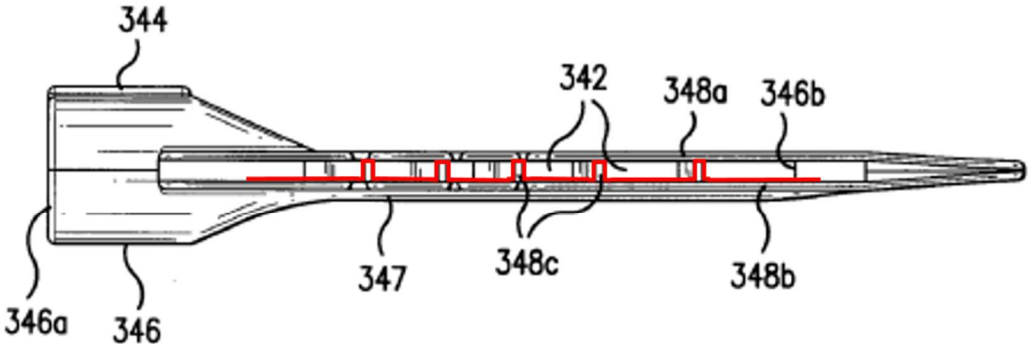
FIG. 3B also illustrates the wave shape from a top-view.

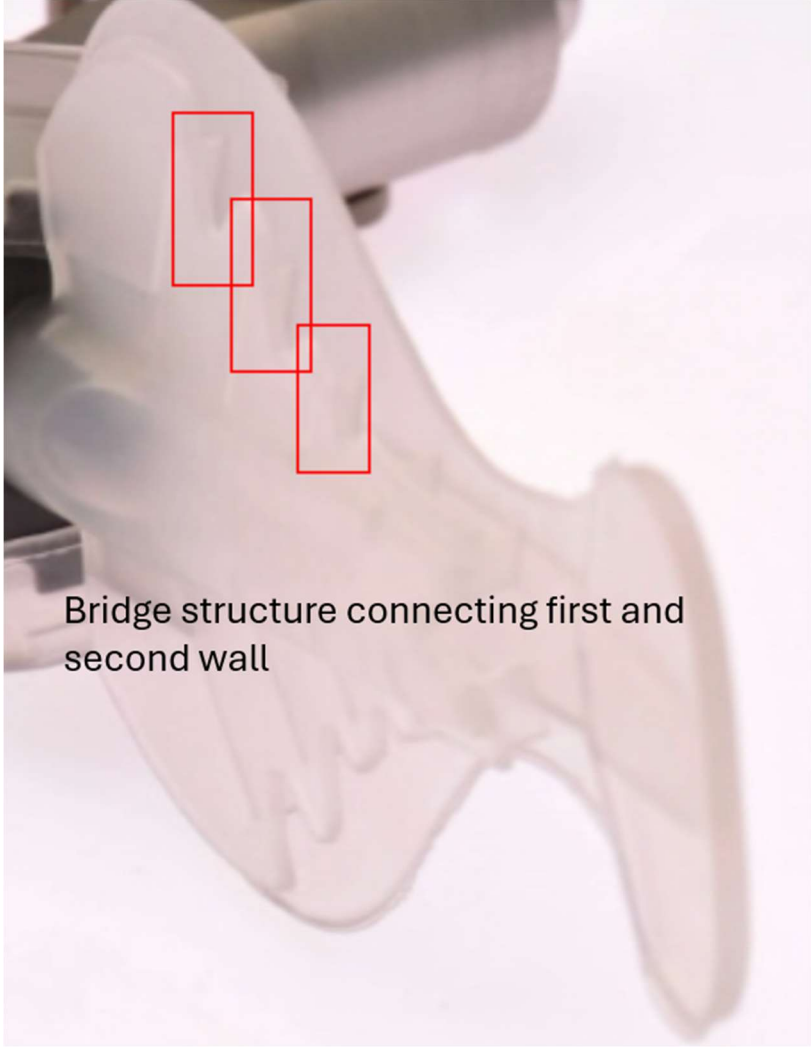
Elements 42 and 43 illustrate the channels, or troughs, and element 48c illustrates the crests. While FIG. 3B is directed to a different embodiment than the embodiment shown in FIGs. 23A-C, Black explains that “the tongue shield aspirator 340 includes features that are similar to those described above with the tongue shield aspirators 40, 240 shown in FIGs. 3, 4.” *Id.*, 11:55-60, 14:2-5. Moreover, the embodiment of FIG. 23 also includes transverse walls and channels. *Id.*, 14:21-47. Thus, FIG. 3B further informs the structure of the tongue shield aspirator 340. Nevertheless, to the extent

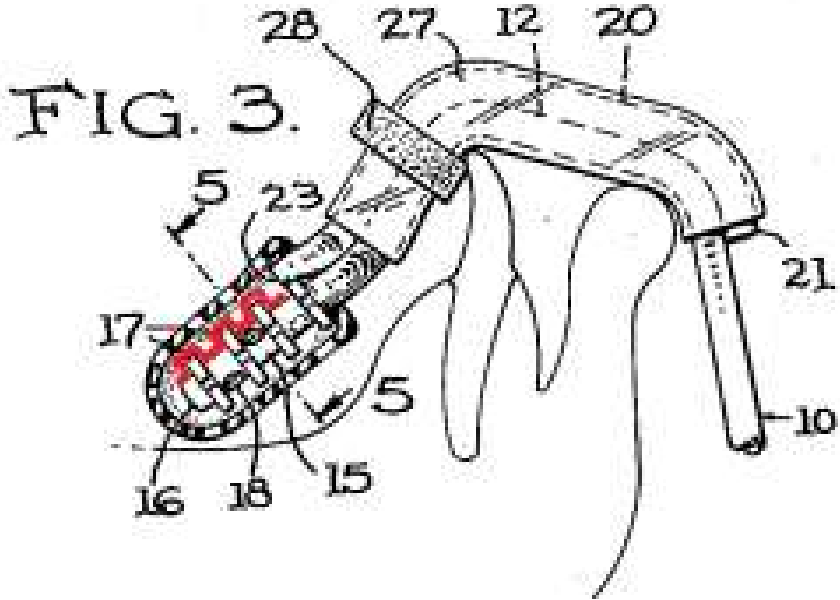
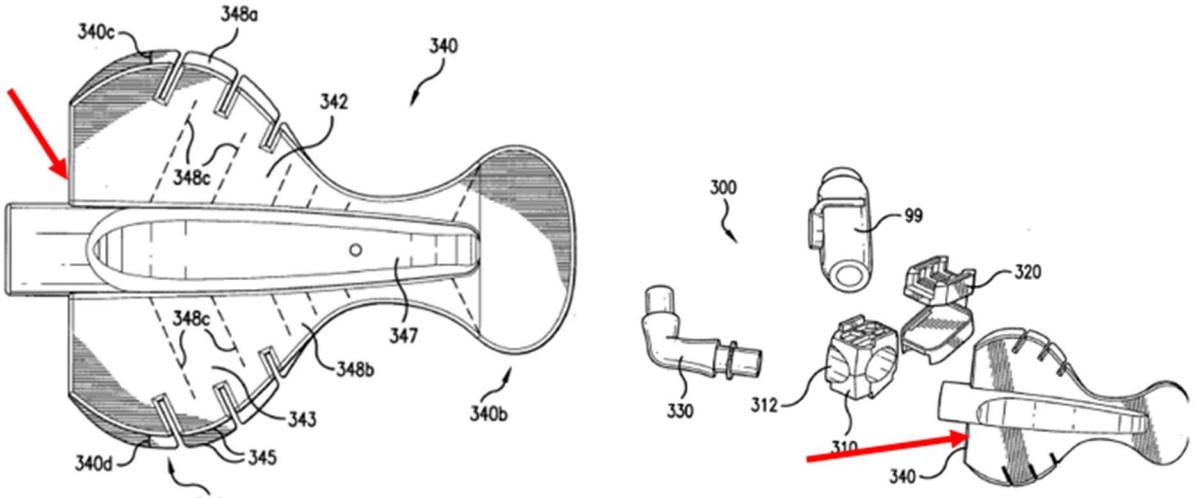
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>obviousness is required here, combining features between the embodiments within the same reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. While this feature seemingly was found to be the point of novelty, Ascentcare notes that during prosecution of the parent application, the same Examiner found that limitation 19(e) was taught by Black.</p> <p>Likewise, AirBug also discloses the same bridge structures:</p> <div>  <p>Bridge structure connecting first and second wall</p> </div> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <div> </div> <p>To the extent that Solmetex contends that Black and AirBug do not teach that the “bridge structure is not attached to the first wall,” such a modification would have been obvious to a PHOSITA. For example, it would have been obvious to a PHOSITA to disconnect the bridge structure from one of the walls such that the internal portions of the mouthpiece would be easier to clean, or to increase the flexibility of the mouthpiece. Specifically, to the extent that Park incorporated the bridge structure of Black or AirBug without separating the bridge structures from one of the walls, the mouthpiece would not be cleanable because there would be isolated pockets that would be inaccessible from the outside.</p> |

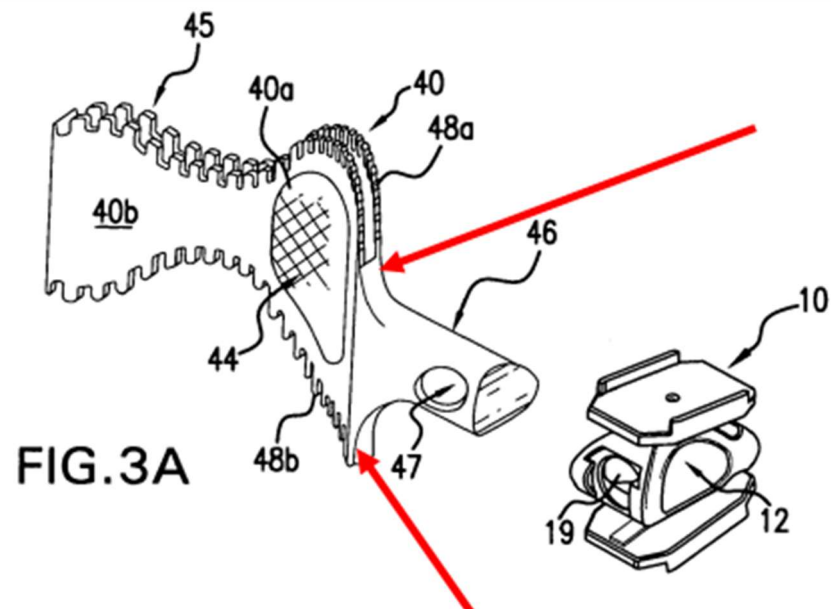


| The '970 Patent                                                                                                                                                                                               | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                               | <p>The spaced-apart projections taught by Baughan could be formed on either the first wall or the second wall. A PHOSITA would know that it makes no difference which wall connects to the projections so long as the projections connect to one of the walls.</p>             |
| <p>1[f] and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the second wall in a wave shape comprising one or more crests and one or more troughs, and</p> | <p>As discussed, both Black and AirBug disclose protrusions “in a wave shape comprising one or more crests and one or more troughs:”</p>  <p style="text-align: center;"><b>FIG. 23C</b></p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                |
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|                 | <div>  <p>Bridge structure connecting first and second wall</p> </div> <p>Baughan discloses the same:</p> |

| The '970 Patent                                                                                                                                                                                       | Exemplary Disclosures in the Prior Art                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                       |  <p>FIG. 3.</p>                  |
| <p>1[g] a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;</p> |  <p>FIG. 23A</p> <p>FIG. 19</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                         |
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|                 | Black teaches a connecting wall that connects one or more edges of the posterior layer 348a to one or more edges of the anterior layer 348b across a span between to the two layers. Black, Fig. 23A; Fig. 19. |



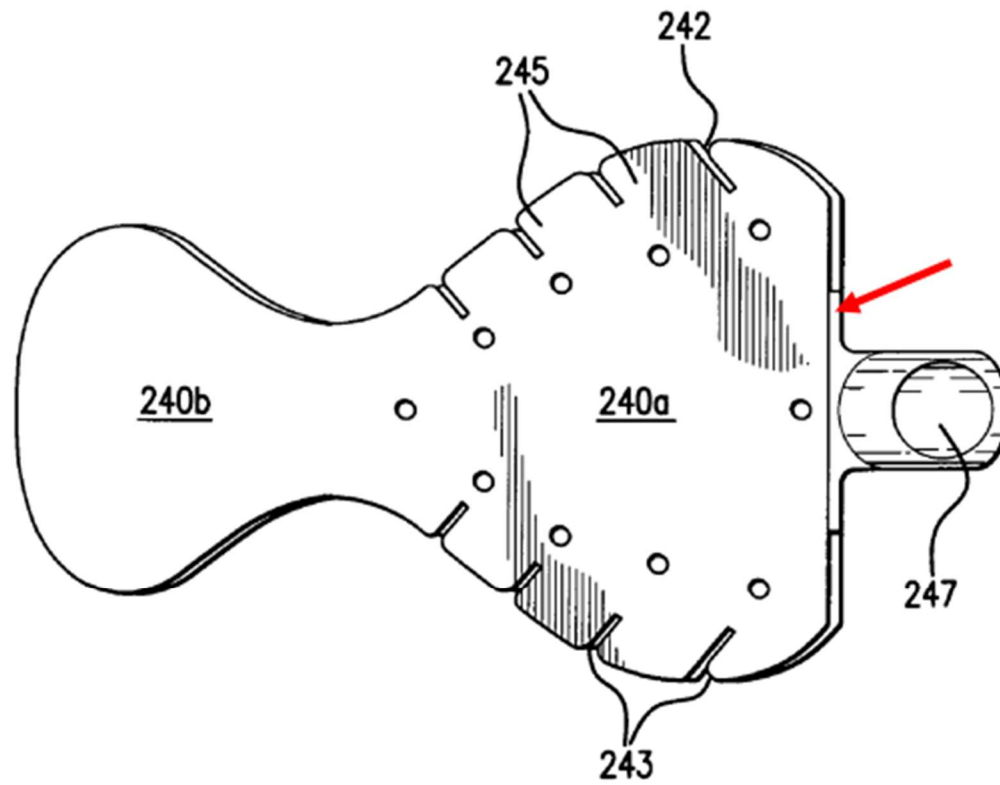
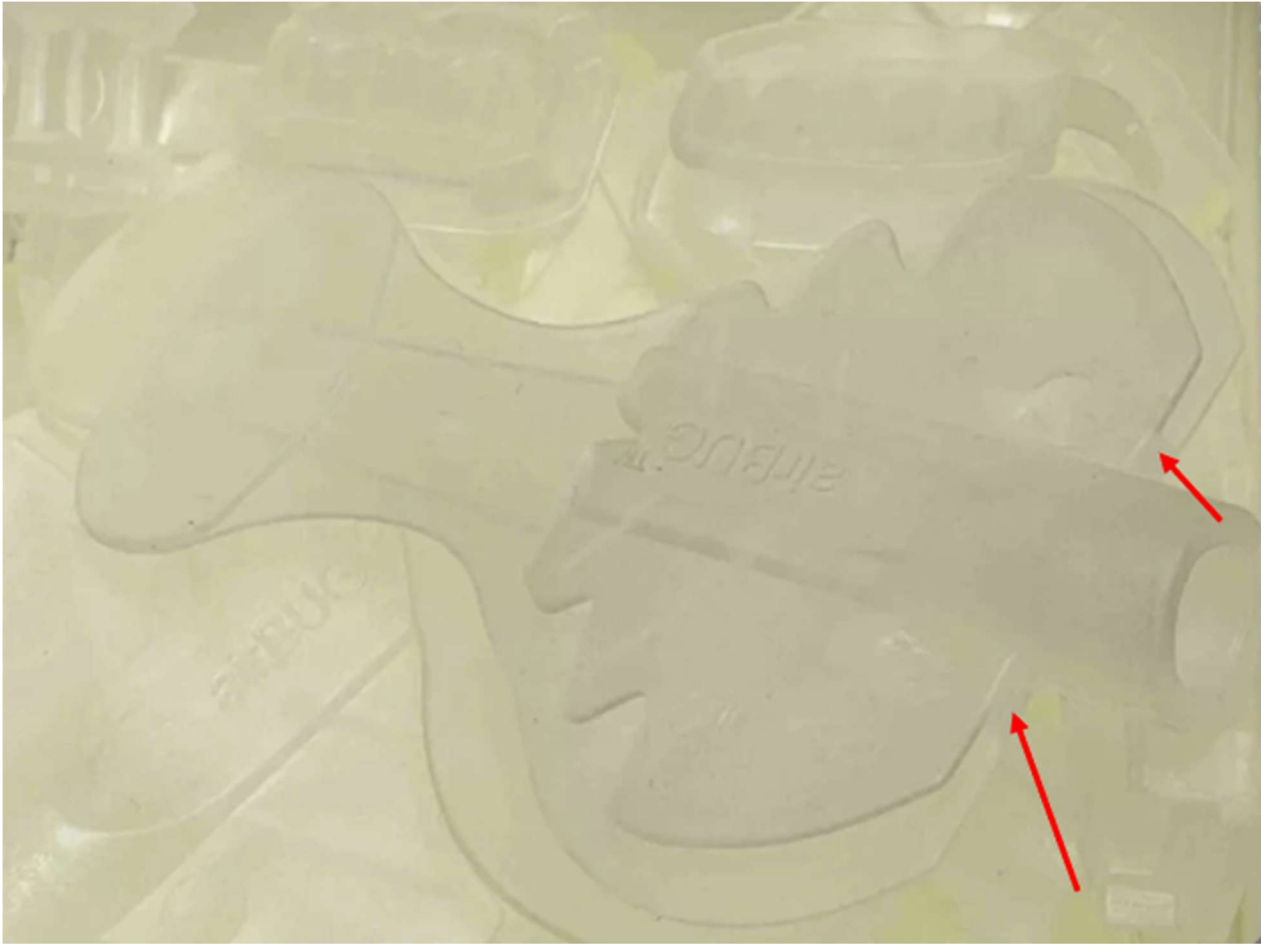


FIG. 4C

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| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                 | <div> </div> <p style="text-align: center;"><b>FIG. 24D</b></p> <p>To the extent Solmetex attempts to argue that the tongue aspirator 340 fails to disclose a connecting wall, such argument fails, as figures from other “substantially similar” embodiments clearly show a connecting wall. <i>Id.</i>, 11:55-60, 14:2-5.</p> <p>As can be seen from multiple embodiments above, Black teaches a connecting wall that connects one or more edges of the posterior layer to one or more edges of the anterior layer across the span between the two layers. All of these embodiments are “substantially similar.” <i>Id.</i>, 16:17-19, 14:2-5, 11:55-60, 6:53-60.</p> <p>To the extent Solmetex argues that the tongue aspirator 340 lacks the connecting wall that is present in almost every other embodiment of Black, combining features between the embodiments of a single reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. Moreover, it would have been obvious to include the connecting wall shown in, for example, FIG. 4C in the embodiment shown in tongue shield aspirator 340 to provide additional structural integrity for the tongue shield aspirator.</p> <p>Finally, to the extent Solmetex argues that any of the above embodiments do not show a connecting wall formed across an entire “edge,” and only partially extends across an edge, it would have been obvious to widen the connecting wall disclosed by Black as such changes would simply be a change in size/proportion. MPEP 2144.04(IV)(A). This change is particularly true when other embodiments, such as FIG 1 and FIG. 3A show a connecting wall spanning the entire end of the mouthpiece. Black, FIGs. 1, 3A. Moreover, the plain language of claim 19 lacks any recitation of “entire” edges, so any such argument finds no basis in the claim language.</p> |

| The '970 Patent                                                                                                                  | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                  | <p>Likewise, under Solmetex's construction of the "connecting wall," the AirBug Mouthpiece also discloses a connecting wall that connects the one or more edges of the first wall to one or more corresponding edges of the second wall across a span between the first wall and the second wall:</p>  |
| <p>1[h] a suction connector extending from the first end of the main body portion and integral to the main body portion, the</p> |                                                                                                                                                                                                                                                                                                                                                                                           |

| The '970 Patent                                                                                                                                                                                                                                                                                                                                                                                | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>suction connector including a cavity extending longitudinally from the main body portion, the cavity in communication with the interior space of the pocket and extending from a first opening of the suction connector at the first end of the main body portion and through a length of the suction connector towards a suction port opening opposite from the main body portion; and</p> | <div> </div> <p>FIG. 18</p> <div> </div> <p>FIG. 19</p> <p>Black teaches a hollow neck 346 that connects the channels of the tongue shield aspirator to an evacuation tube that connects to an HVE valve (vacuum source). Black, 15:21-51; 16:1-3. The hollow neck 346 is formed at the first end of the tongue shield aspirator 340.</p> <p>Likewise, AirBug Mouthpiece discloses a suction connector portion connected to a first end of the main body portion, the suction connector configured to connect a vacuum source to the interior space of the pocket:</p> |

| The '970 Patent                                                                                                          | Exemplary Disclosures in the Prior Art                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                          |                                                                                                             |
| <p>1[i] a mouth prop molded in one piece, and wherein the suction connector extends through and past the mouth prop.</p> | <p>See 1[h]. See also Black, 5:15-20 (“the various embodiments of the invention . . . may be manufactured as a one-piece, or unitary, component . . .”).</p> <p>AirBug discloses the same:</p> |

| The '970 Patent                                                                                                                                                                              | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                              |  <p>To the extent that Solmetex disagrees that Black and AirBug disclose a one piece mouth prop, it would have been obvious to a PHOSITA to have mouth prop to be in one piece to improve manufacturability and ease of use. Such a mouth prop was common in the art. <i>See</i> Ex. C-1.</p> |
| <p>9 The mouthpiece of claim 1, wherein the suction connector comprises a cutout corresponding to a protrusion on a vacuum adapter for an interlocking fit.</p> | <p>Black teaches a suction connector 446 with cutout 441 configured to interlock with corresponding protrusion 332 of a vacuum adapter, wherein a shape of the cutout follows a shape of a shield logo.</p>                                                                                                                                                                     |

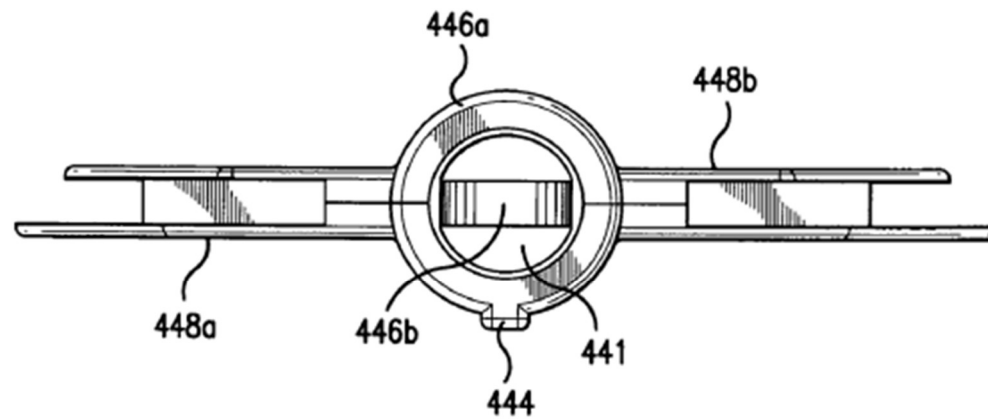


FIG. 24D

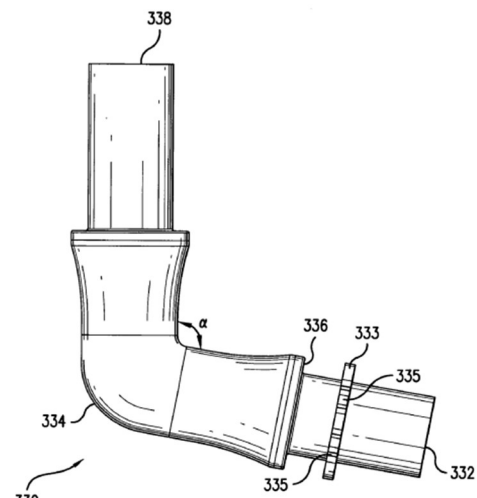
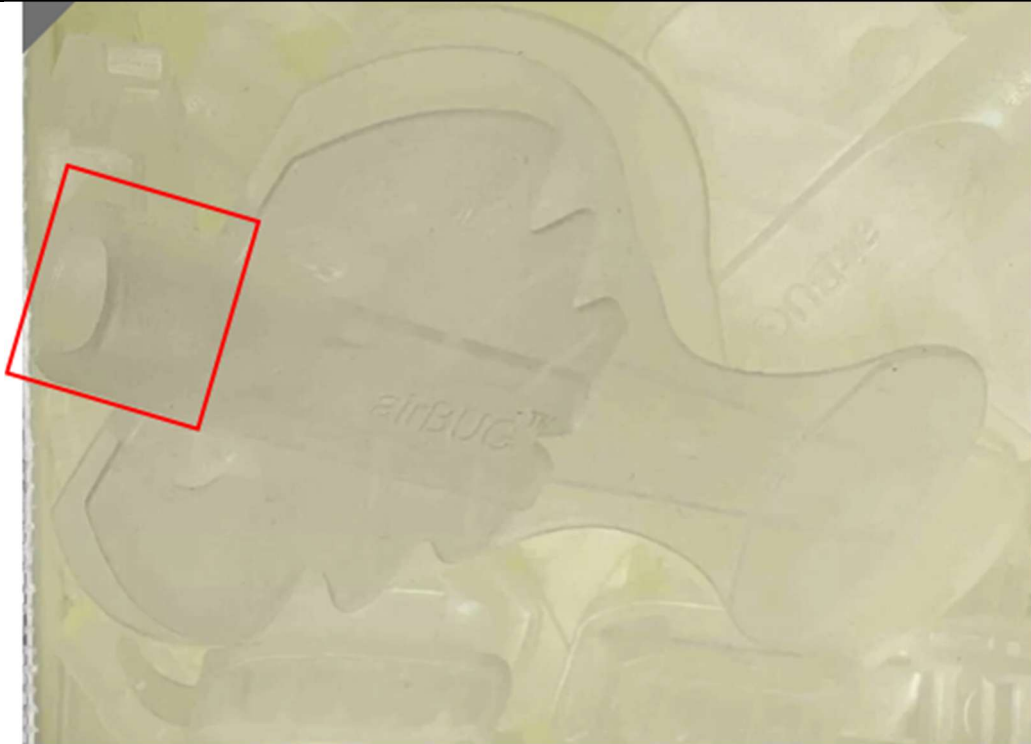
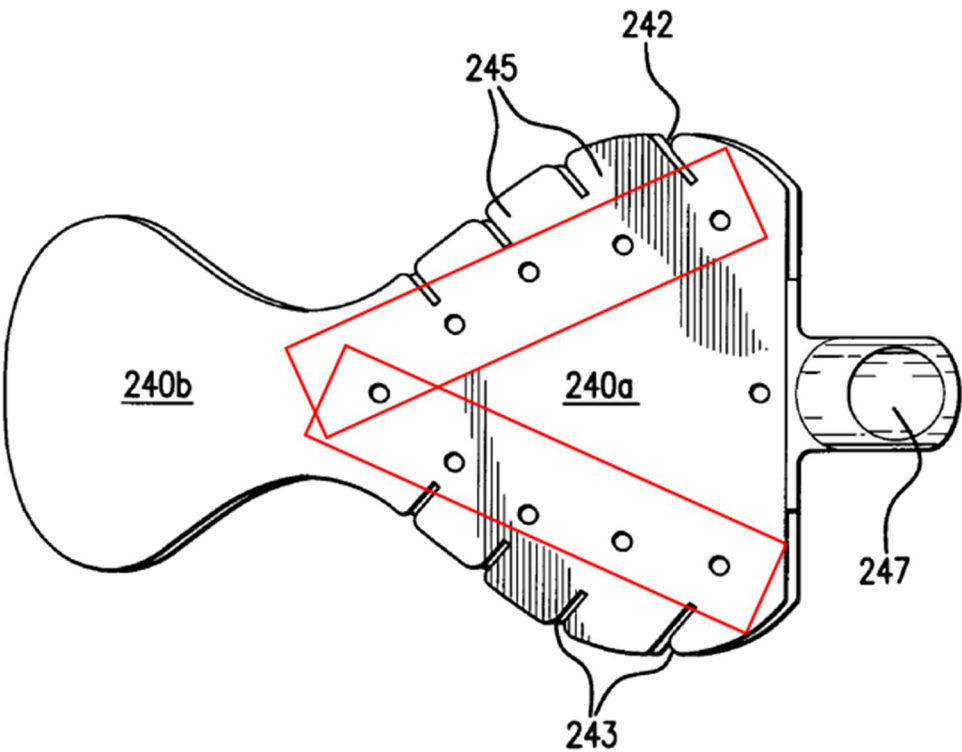


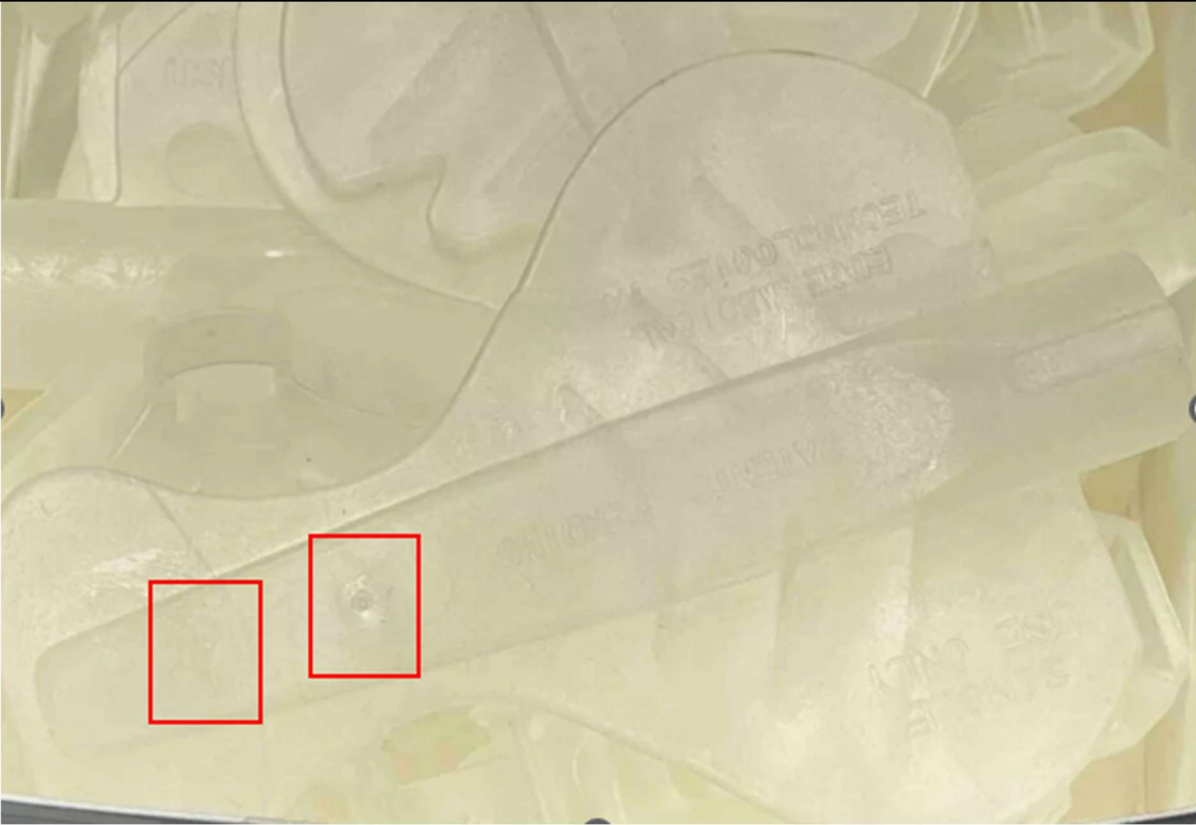
FIG. 22A

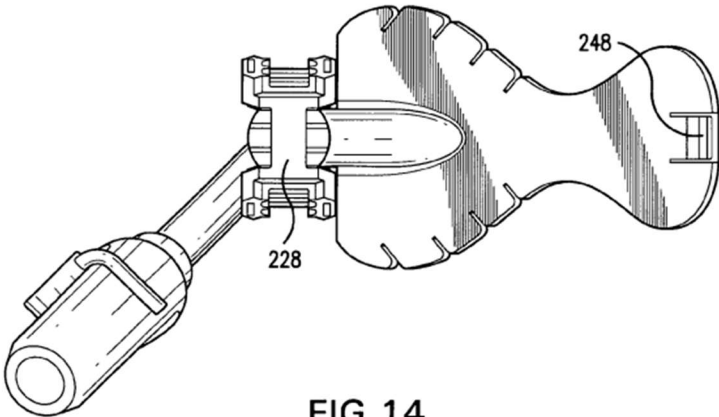
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>Further, Black teaches a “lock-and-key locking mechanism” that interlocks the bite member 310 and the evacuation tube 330. Black, 13:16-67. “[T]he lock-and-key mechanism ensures that the evacuation tube [i.e., vacuum source] will not detach from the bite member during use...” Black, 13:57-59. This is exactly, or at worst an obvious variation of, what claim 6 describes.</p> <p>AirBug Mouthpiece discloses the same:</p>  <p>To the extent that Solmetex contends that neither Black nor AirBug disclose a shield shaped cutout, Ascentcare notes that shields are commonly circular, and Solmetex does not specify any specific shield in its specification.</p> |

| The '970 Patent                                                                                                                                                                                                                                         | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|                                                                                                                                                                                                                                                         | <p>It would have been obvious to a PHOSITA to modify Black or AirBug's suction connector to make a more secure connection between the mouthpiece and vacuum source. Black, 16:1-7. In fact, Black points out how important it is to have a secure connection to the vacuum source. Black, 13:57-59. Holes formed on the suction connector that accept projections on the vacuum tube are merely an obvious variant of Black's lock-and-key mechanism, since it is just choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success. MPEP 2143(I)(E).</p> <p>To the extent that Solmetex contends that none of the references disclose a "shield shape," Ascentcare further notes that the USPTO has already noted that "having a particular shape for the cutout is a matter of choice in which a person of ordinary skill in the art would have found obvious by the absent [<i>sic</i>] of persuasive evidence in the present application, that the particular configuration of the claimed shape of the cutout is significant." <i>See</i> Prosecution History '329 Patent, at Office Action 9/23/2023, page 11, ¶ 32. Changing the slots 630 from rectangular to a "shield" shape is obvious. MPEP 2144.04(IV)(B).</p> <p>The Supreme Court has likewise found modifications on one system to fit another on the market to be obvious to a PHOSITA. <i>KSR Int'l Co. v. Teleflex Inc.</i>, 550 U.S. 398, 424, 127 S. Ct. 1727, 1744, 167 L. Ed. 2d 705 (2007) ("The interaction of multiple components means that changing one component often requires the others to be modified as well. Technological developments made it clear that engines using computer-controlled throttles would become standard. As a result, designers might have decided to design new pedals from scratch; but they also would have had reason to make pre-existing pedals work with the new engines. Indeed, upgrading its own pre-existing model led KSR to design the pedal now accused of infringing the Engelgau patent.").</p> <p>Accordingly, to the extent that Black or AirBug do not disclose a shield shaped cutout, it would have been obvious to modify Black or AirBug to include a shield shaped cutout.</p> |
| <p>10 The mouthpiece of claim 1, wherein the suction connector connects the interior of the pocket to a vacuum source, wherein activation of the vacuum source provides suction of fluids from the interior of the pocket toward the vacuum source.</p> | <p>Black teaches a hollow neck 346 formed on one end of the tongue shield aspirator 340 that connects the aspirator 340 to an evacuation tube, which is a vacuum source (HVE valve) that connects to the channels in the tongue shield aspirator. Black, Abstract, 1:62-2:7, 10:18-33, 15:21-51, 16:1-3, FIGS. 23C, 24D. Black also teaches that the neck 346 (suction connector) has a conduit through it that is in communication with the channels 342, 343 of the tongue shield aspirator 340. Black, 15:21-35</p> <p>AirBug discloses the same:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| The '970 Patent                                                                                                                                            | Exemplary Disclosures in the Prior Art                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                            |                                                                                                               |
| <p>11 The mouthpiece of claim 1, wherein at least one of the first wall, the second wall, or the connecting wall comprise a plurality of perforations.</p> | <p>Black teaches a tongue shield aspirator having first and second pluralities of holes (perforations) formed along first and second edges of the first wall, respectively. Black, FIG. 4C.</p> |

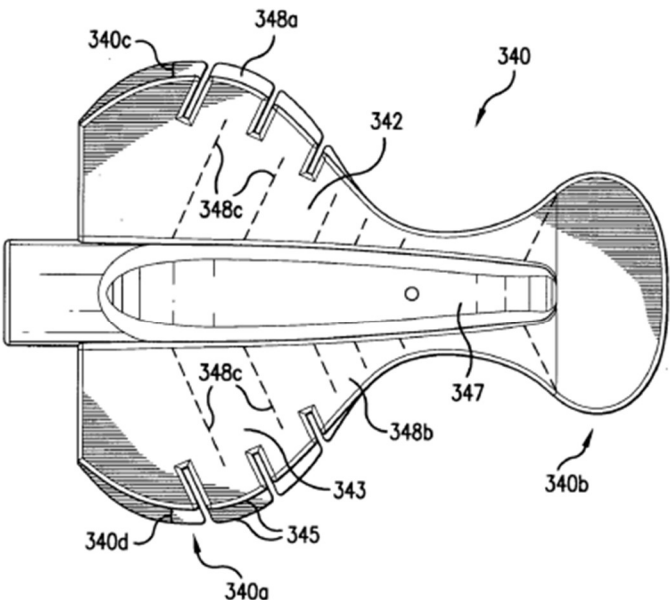
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                          |
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|                 |  <p>AirBug Mouthpiece discloses the same:</p> |

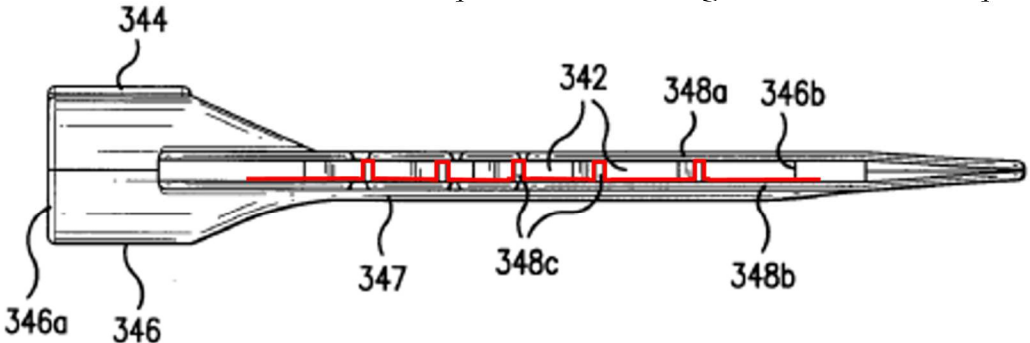
| The '970 Patent                                                                                                                                                                                               | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                               |  <p>A PHOSITA have been motivated to modify the posterior layer 348a of Black or AirBug to include the evacuation holes 410 improve the suction through the tongue shield aspirator 340, and allow for suction through the posterior wall in case fluid escaped the barrier created by the tongue shield aspirator.</p> |
| <p>12 The mouthpiece of claim 11, wherein activation of a vacuum source associated with suction connector extending from the first end of the main body portion draws fluids from an exterior of the main</p> | <p>See Claim 10.</p>                                                                                                                                                                                                                                                                                                                                                                                      |

| The '970 Patent                                                                                                                                                                                                                                 | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| body portion through one or more of the plurality of perforations into the interior space of the pocket of the main body portion.                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 13 The mouthpiece of claim 1, further comprising a cheek retractor portion connected to the main body portion and having a surface that applies pressure when bent, wherein the pressure is based on resilience of the cheek retractor portion. | <p>Both Black and AirBug disclose a cheek retractor attached to the main body portion that applies pressure when bent. Black, 5:5-7.</p> <div>  <p>FIG. 14</p> </div> <div>  </div> |
| 15 The mouthpiece of claim 1, wherein the main body portion is formed by injection-molding as one piece.                                                                                                                                        | Both Black and AirBug disclose the mouthpiece formed by injection molding as one piece. Black 5:15-49.                                                                                                                                                                                                                                                                                                                                                                         |
| 16 The mouthpiece of claim 1, wherein a material that forms the main body portion is a flexible,                                                                                                                                                | Both Black and AirBug disclose the mouthpiece as a flexible, translucent, high heat-resistant, autoclavable silicone-based material. Black 9-10.                                                                                                                                                                                                                                                                                                                               |

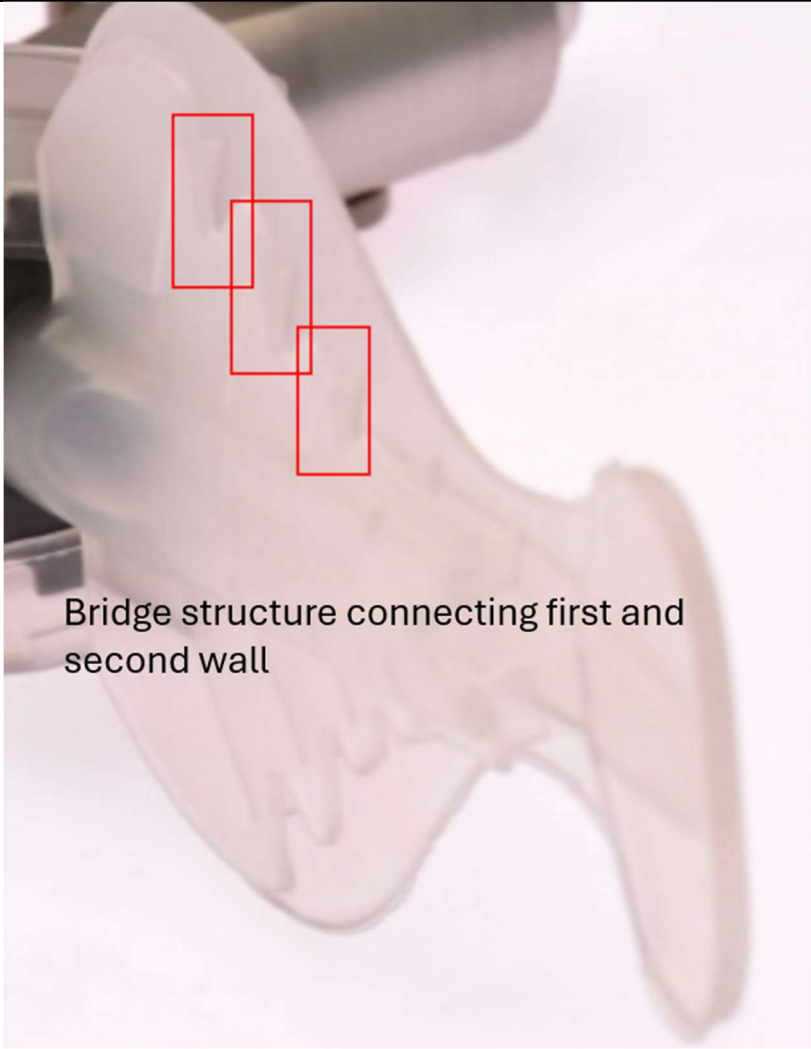
| The '970 Patent                                                                                                                                                                                | Exemplary Disclosures in the Prior Art                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| translucent, high heat-resistant, autoclavable silicone-based material.                                                                                                                        |                       |
| 18[a] A mouthpiece comprising:                                                                                                                                                                 | To the extent the preamble is limiting, each of the references discussed herein is a dental mouthpiece. |
| 18[b] a main body portion configured as a pocket at least partially enclosing an interior space that extends from a first end to a second end of the main body portion, the pocket defined by: | <i>See</i> Limitation 1[b].                                                                             |
| 18[c] a first wall extending from the first end to the second end, the first wall having an interior surface facing the interior space of the pocket, and                                      | <i>See</i> Limitation 1[b].                                                                             |

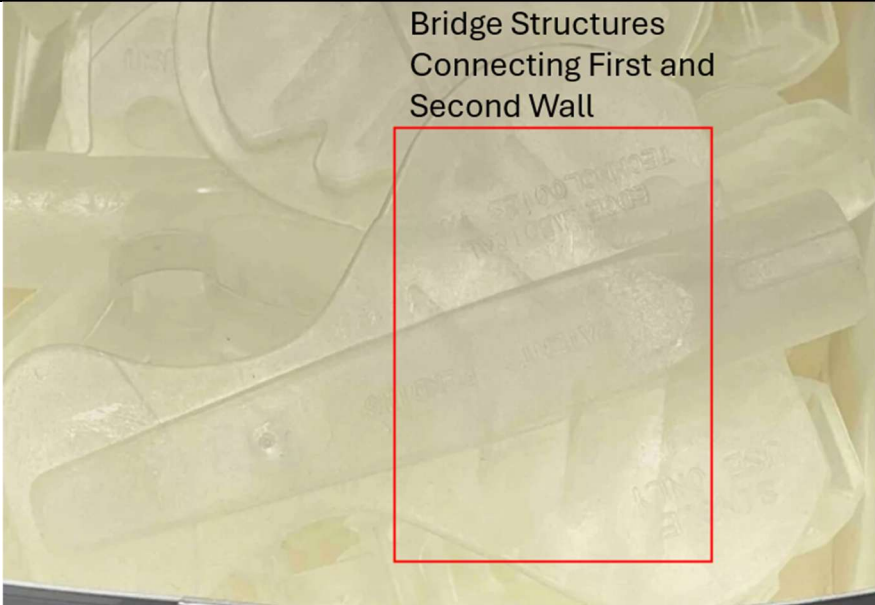
| The '970 Patent                                                                                                                                                                                                       | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>18[d] a second wall located at a distance from to the first wall and extending from the first end to the second end, the second wall having an interior surface facing the interior surface of the first wall,</p> | <div> </div> <p><b>FIG. 23A</b></p> <p>The main body 340a of Black includes an anterior layer 348b, which is a second wall. <i>Id.</i>, 14:25-30. As shown, the anterior layer 348b has a shape defined by one or more edges along one or more sides.</p> <p>The posterior layer 348a corresponds in shape to the anterior layer 348b, as shown in FIG. 23A. The anterior layer 348a matches the shape of the posterior layer 348a and is very similar in size. Thus, the anterior layer also is narrower at the second end than at the first end.</p> <p>AirBug discloses the same:</p> |

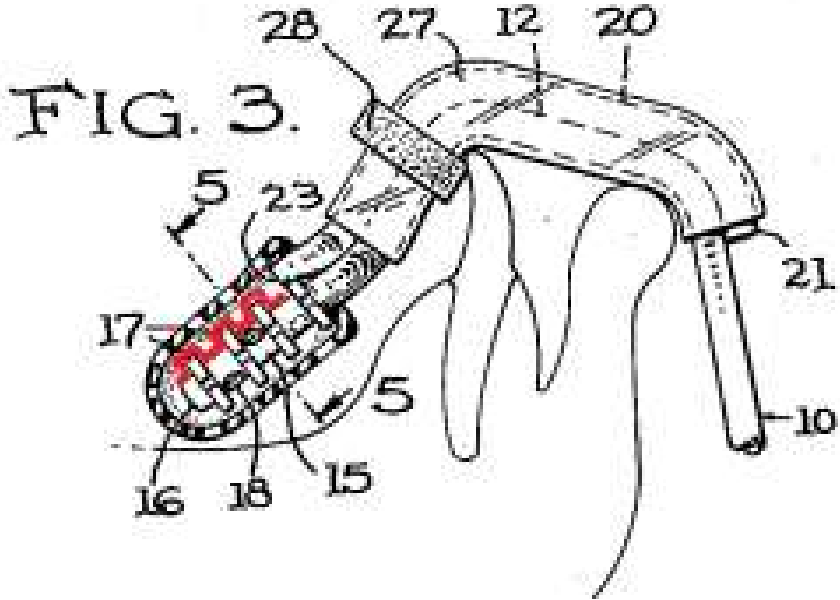
| The '970 Patent                                                                                                                                                                                                                                                                                                                                                                                                                                              | Exemplary Disclosures in the Prior Art                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |
| <p>18[e] the second wall comprising a bridge structure that includes a plurality of protrusions integral with and protruding from the interior surface of the second wall and extending across the distance between the first wall and the second wall, wherein the bridge structure is not attached to the first wall, and wherein the plurality of protrusions of the bridge structure protrude from the interior surface of the second wall in a wave</p> |  <p style="text-align: center;"><b>FIG. 23A</b></p> |

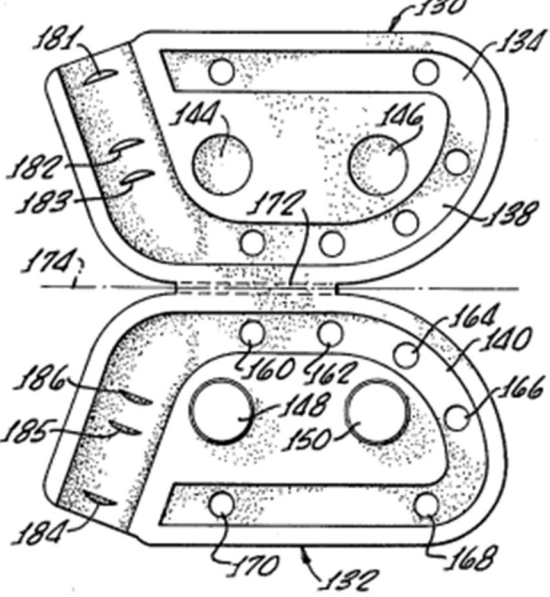
| The '970 Patent                                                         | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>shape comprising one or more crests and one or more troughs, and</p> | <p>Black teaches transverse walls 348c spaced apart from each other to form channels 342 therebetween. <i>Id.</i>, 14:21-47. Black explains that these transverse walls form conduits for debris and fluid, “thereby allowing for simultaneous aspiration of debris and fluid from top (palate of mouth) to bottom (floor of mouth), and through the passageway, during dental procedures.” <i>Id.</i>, 14:38-47. The transverse walls 348c are a bridge structure, as claimed. Indeed, the Examiner also found that Black taught the claimed bridge structure. <i>Id.</i></p> <p>More specifically, the transverse walls extend from an interior surface of the posterior flap 348a and extend up to the anterior flap 348b as a plurality of protrusions (Transverse walls shown dashed). <i>Id.</i>, 14:21-47; These transverse walls 348a extend from an interior surface of the anterior flap 348b and are integral to the anterior flap 348b. <i>Id.</i>, 14:25-30.</p>  <p style="text-align: center;"><b>FIG. 23C</b></p> <p>The transverse walls 348c extend toward the posterior layer 348a from the interior surface of the anterior flap 348b and connect to the posterior flap 348a. <i>Id.</i>, 14:21-63. The transverse walls 348c form crests in a wave shape and the channels 342 form troughs in a wave shape. Annotated FIG. 23C shown below illustrates the square wave shape formed by the presence of absence of the transverse walls.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <div> </div> <p><b>FIG. 3B</b></p> <p>FIG. 3B also illustrates the wave shape from a top-view.</p> <p>Elements 42 and 43 illustrate the channels, or troughs, and element 48c illustrates the crests. While FIG. 3B is directed to a different embodiment than the embodiment shown in FIGs. 23A-C, Black explains that “the tongue shield aspirator 340 includes features that are similar to those described above with the tongue shield aspirators 40, 240 shown in FIGs. 3, 4.” <i>Id.</i>, 11:55-60, 14:2-5. Moreover, the embodiment of FIG. 23 also includes transverse walls and channels. <i>Id.</i>, 14:21-47. Thus, FIG. 3B further informs the structure of the tongue shield aspirator 340. Nevertheless, to the extent obviousness is required here, combining features between the embodiments within the same reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. While this feature seemingly was found to be the point of novelty, Ascentcare notes that during prosecution of the parent application, the same Examiner found that limitation 19(e) was taught by Black.</p> <p>Likewise, AirBug also discloses the same bridge structures:</p> |

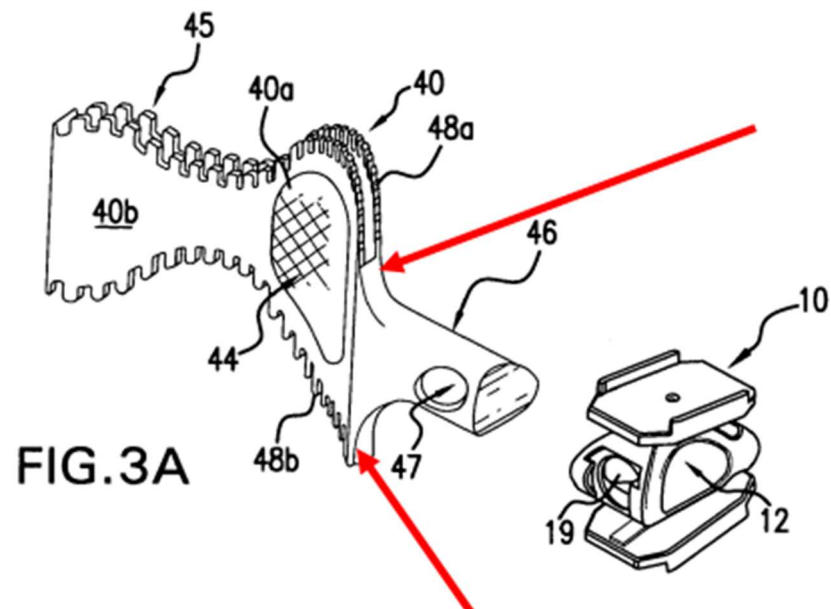
| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                    |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |  <p>Bridge structure connecting first and second wall</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <div>  <p>Bridge Structures<br/>Connecting First and<br/>Second Wall</p> </div> <p>To the extent that Solmetex contends that Black and AirBug do not teach that the “bridge structure is not attached to the first wall,” such a modification would have been obvious to a PHOSITA. For example, it would have been obvious to a PHOSITA to disconnect the bridge structure from one of the walls such that the internal portions of the mouthpiece would be easier to clean, or to increase the flexibility of the mouthpiece. Specifically, to the extent that Park incorporated the bridge structure of Black or AirBug without separating the bridge structures from one of the walls, the mouthpiece would not be cleanable because there would be isolated pockets that would be inaccessible from the outside.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                 |  <p>FIG. 3.</p> <p>Further, Baughan teaches such a mechanical element that prevents collapse under suction. Baughan, 3:43-48. Specifically, Baughan teaches three projecting discs 17 that prevent collapse under suction when a sleeve is inserted over a tube 15. Baughan, 2:19-25, 2:51-55, 3:43-48. The discs 17 project outward from the tube, span the distance between the tube and the sleeve, and engage the sleeve. <i>Id.</i> These rigid structures, spaced apart from each other, prevent the sleeve from collapsing under suction. <i>Id.</i> Baughan teaches that the projecting discs 17 are secured to the tube 15 but the discs 17 are not attached to the sleeve 24, as they merely contact the sleeve or the sleeve rests upon the discs. Baughan, 2:19-25, 2:51-62 Thus, Baughan teaches projecting discs connected to and protruding from one structure (the tube 15) but not attached to another structure (the sleeve 24).</p> <p>While Baughan teaches outward projecting discs, a PHOSITA using basic common sense, would modify the discs 17 for a tube-shaped embodiment to be projections for a flatter, non-tube embodiment. 3. Indeed, it was well known in the art how to make projections on a flat surface. Johnson, FIG. 3, 4:16-23 Johnson further teaches that the projections are molded projections, which means the projections are integral with an interior surface on which they were formed. <i>Id.</i> Even so, making something integral is an obvious design choice. MPEP 2144.04(V)(B).</p> <p>Indeed, Johnson explicitly discloses bridge structures that may be disconnected from each wall simply by opening the mouthpiece.</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|                 | <p><i>FIG. 9.</i></p>  <p>Further, the MPEP provides that modifying something to be “separable” is a common practice, and are considered routine changes. MPEP § 2144.04V.C. (citing <i>In reDulberg</i>, 289 F.2d 522, 523 (CCPA 1961)).</p> <p>The spaced-apart projections taught by Baughan could be formed on either the first wall or the second wall. A PHOSITA would know that it makes no difference which wall connects to the projections so long as the projections connect to one of the walls.</p> |

| The '970 Patent                                                                                                                                                                                        | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                        |
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| <p>18[f] a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall across the distance between the first wall and the second wall;</p> | <div> </div> <div> <p>FIG. 23A</p> </div> <div> </div> <div> <p>FIG. 19</p> </div> <p>Black teaches a connecting wall that connects one or more edges of the posterior layer 348a to one or more edges of the anterior layer 348b across a span between to the two layers. Black, Fig. 23A; Fig. 19.</p> |



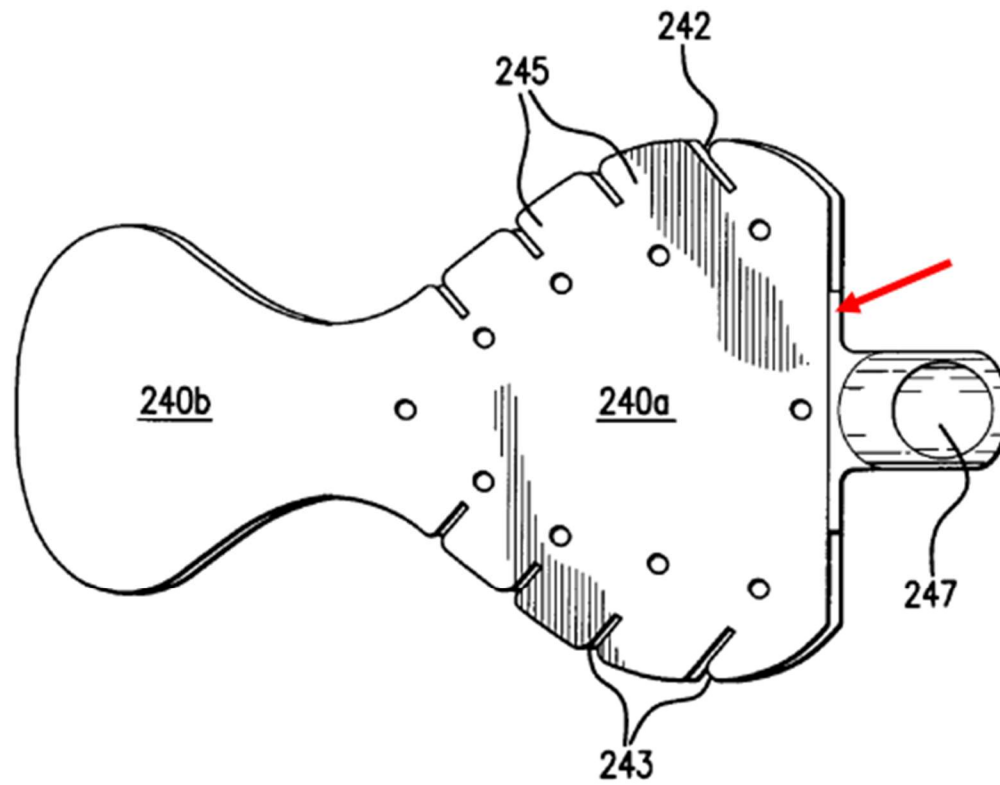
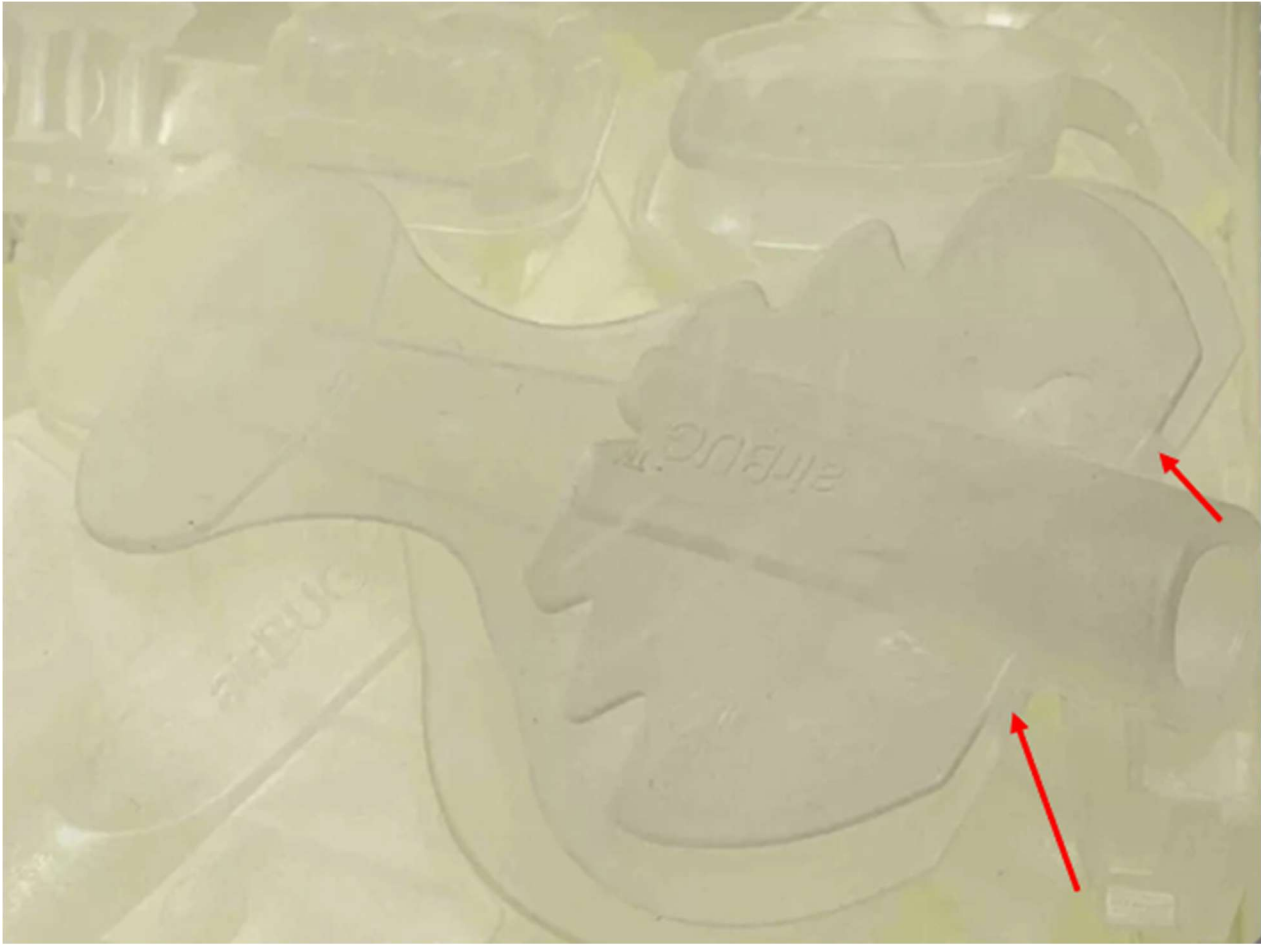


FIG. 4C

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| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|                 | <div> </div> <p><b>FIG. 24D</b></p> <p>To the extent Solmetex attempts to argue that the tongue aspirator 340 fails to disclose a connecting wall, such argument fails, as figures from other “substantially similar” embodiments clearly show a connecting wall. <i>Id.</i>, 11:55-60, 14:2-5.</p> <p>As can be seen from multiple embodiments above, Black teaches a connecting wall that connects one or more edges of the posterior layer to one or more edges of the anterior layer across the span between the two layers. All of these embodiments are “substantially similar.” <i>Id.</i>, 16:17-19, 14:2-5, 11:55-60, 6:53-60.</p> <p>To the extent Solmetex argues that the tongue aspirator 340 lacks the connecting wall that is present in almost every other embodiment of Black, combining features between the embodiments of a single reference “does not require a leap of inventiveness.” <i>Boston</i>, 554 F.3d at 991. Moreover, it would have been obvious to include the connecting wall shown in, for example, FIG. 4C in the embodiment shown in tongue shield aspirator 340 to provide additional structural integrity for the tongue shield aspirator.</p> <p>Finally, to the extent Solmetex argues that any of the above embodiments do not show a connecting wall formed across an entire “edge,” and only partially extends across an edge, it would have been obvious to widen the connecting wall disclosed by Black as such changes would simply be a change in size/proportion. MPEP 2144.04(IV)(A). This change is particularly true when other embodiments, such as FIG 1 and FIG. 3A show a connecting wall spanning the entire end of the mouthpiece. Black, FIGs. 1, 3A. Moreover, the plain language of claim 19 lacks any recitation of “entire” edges, so any such argument finds no basis in the claim language.</p> |

| The '970 Patent                                                                                          | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                    |
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|                                                                                                          | <p>Likewise, under Solmetex's construction of the "connecting wall," the AirBug Mouthpiece also discloses a connecting wall that connects the one or more edges of the first wall to one or more corresponding edges of the second wall across a span between the first wall and the second wall:</p>  |
| <p>18[g] a mouth prop molded in one piece and located at the first end of the main body portion; and</p> | <p>Black discloses a mouth prop located at the first end of the main body portion:</p>                                                                                                                                                                                                                                                                                                    |

| The '970 Patent                                  | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                        |
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|                                                  | <div> </div> <div>FIG. 18</div> <div> </div> <div>FIG. 19</div> <p>AirBug discloses the same:</p> <div> </div> |
| 18[h] a suction connector integral with the main |                                                                                                                                                                                                                                                                                               |

| The '970 Patent                                                                                                                                                                                            | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p>body portion and extending from the first end of the main body portion past the mouth prop, wherein the suction connector includes a cavity in communication with the interior space of the pocket.</p> | <div> </div> <p>FIG. 18</p> <div> </div> <p>FIG. 19</p> <p>Black teaches a hollow neck 346 that connects the channels of the tongue shield aspirator to an evacuation tube that connects to an HVE valve (vacuum source). Black, 15:21-51; 16:1-3. The hollow neck 346 is formed at the first end of the tongue shield aspirator 340.</p> <p>Likewise, AirBug Mouthpiece discloses a suction connector portion connected to a first end of the main body portion, the suction connector configured to connect a vacuum source to the interior space of the pocket:</p> |

| The '970 Patent | Exemplary Disclosures in the Prior Art                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|                 |  <p>The image shows a dental mold, likely a wax or plaster model of a human head and neck. A red rectangular box is drawn on the left side of the mold, highlighting a specific area. The mold appears to be a negative of a dental appliance or a study model. The text "airBUG™" is visible on the mold, suggesting it is a product of Solmetex. The mold is set against a light-colored background.</p> |