

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ALIVECOR, INC.,  
Petitioner,

v.

APPLE INC.,  
Patent Owner

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Case IPR2023-00949  
Patent 10,866,619

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**PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY**

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**RELEVANT CLAIM LANGUAGE**

| <b>Claim 11</b> |                                                                                                                                                                                                                                                                   |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [11.pre]        | A fingerprint sensing system for a wearable device comprising:                                                                                                                                                                                                    |
| [11.a]          | an enclosure defining an enclosed volume and an opening along an exterior surface;                                                                                                                                                                                |
| [11.b]          | a processor disposed in the enclosed volume;                                                                                                                                                                                                                      |
| [11.c]          | a button assembly positioned in the opening and defining an input surface, the button assembly comprising: a fingerprint sensor positioned inward from the input surface; and a retainer positioned inward from the input surface and defining a sealing surface; |
| [11.c.i]        | a button assembly positioned in the opening and defining an input surface, the button assembly comprising: a fingerprint sensor positioned inward from the input surface;                                                                                         |
| [11.c.ii]       | a button assembly positioned in the opening and defining an input surface, the button assembly comprising: ... a retainer positioned inward from the input surface and defining a sealing surface;                                                                |
| [11.d]          | a seal disposed between the sealing surface of the retainer and a surface of the opening;                                                                                                                                                                         |
| [11.e]          | a passage extending from the opening to the enclosed volume;                                                                                                                                                                                                      |

|                                                                                                                                                    |                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [11.f]                                                                                                                                             | a flexible conduit electrically connecting the fingerprint sensor to the processor; wherein:                                                                 |
| [11.g]                                                                                                                                             | a portion of the flexible conduit is sandwiched between the seal and the sealing surface of the retainer or between the seal and the surface of the opening. |
| <b>Claim 12</b>                                                                                                                                    |                                                                                                                                                              |
| The fingerprint sensing system of claim 11, wherein the flexible conduit extends through the passage.                                              |                                                                                                                                                              |
| <b>Claim 13</b>                                                                                                                                    |                                                                                                                                                              |
| The fingerprint sensing system of claim 11, wherein the flexible conduit is coupled to a second flexible conduit that extends through the passage. |                                                                                                                                                              |
| <b>Claim 14</b>                                                                                                                                    |                                                                                                                                                              |
| The fingerprint sensing system of claim 11, wherein the fingerprint sensor is further configured to detect a touch.                                |                                                                                                                                                              |
| <b>Claim 15</b>                                                                                                                                    |                                                                                                                                                              |
| [15.pre]                                                                                                                                           | The fingerprint sensing system of claim 11, wherein:                                                                                                         |
| [15.a]                                                                                                                                             | the button assembly further comprises a tactile dome switch disposed inward from the retainer; and                                                           |

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [15.b]          | the tactile dome switch compresses in response to a press on the input surface.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Claim 16</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| [16.pre]        | A watch comprising:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| [16.a]          | an enclosure defining an enclosed volume and an opening formed in a sidewall;                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [16.b]          | a processor disposed in the enclosed volume;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| [16.c]          | a display positioned within the enclosure and operably coupled to the processor;                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| [16.d]          | a watchband attached to the enclosure and configured to couple the watch to a user;                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| [16.e]          | a button assembly disposed within the opening, the button assembly comprising: a button housing; an input member with an input surface; a fingerprint sensor positioned below the input member and configured to produce an output signal in response to a touch on the input surface, the output signal corresponding to a fingerprint; a touch sensor configured to detect the touch; a flexible conduit electrically coupled to the fingerprint sensor and configured to transmit the output signal to the processor; and |

|                 |                                                                                                                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [16.e.i]        | a button assembly disposed within the opening, the button assembly comprising: a button housing;                                                                                                                                                                                    |
| [16.e.ii]       | a button assembly disposed within the opening, the button assembly comprising: ... an input member with an input surface;                                                                                                                                                           |
| [16.e.iii]      | a button assembly disposed within the opening, the button assembly comprising: ... a fingerprint sensor positioned below the input member and configured to produce an output signal in response to a touch on the input surface, the output signal corresponding to a fingerprint; |
| [16.e.iv]       | a button assembly disposed within the opening, the button assembly comprising: ... a touch sensor configured to detect the touch;                                                                                                                                                   |
| [16.e.v]        | a button assembly disposed within the opening, the button assembly comprising: ... a flexible conduit electrically coupled to the fingerprint sensor and configured to transmit the output signal to the processor;                                                                 |
| [16.f]          | a seal positioned between the button housing and a surface of the opening;                                                                                                                                                                                                          |
| [16.g]          | wherein a portion of the flexible conduit is sandwiched between the seal and the button housing or between the seal and the surface of the opening.                                                                                                                                 |
| <b>Claim 17</b> |                                                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                           |                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| [17.pre]                                                                                                                                                                                                                                                  | The watch of claim 16, further comprising:                                                |
| [17.a]                                                                                                                                                                                                                                                    | a passage extending from the opening to the enclosed volume; wherein                      |
| [17.b]                                                                                                                                                                                                                                                    | the flexible conduit extends from the opening to the enclosed volume through the passage. |
| <b>Claim 18</b>                                                                                                                                                                                                                                           |                                                                                           |
| The watch of claim 16, further comprising: a fastener attaching the button housing to the enclosure and placing the seal in compression.                                                                                                                  |                                                                                           |
| <b>Claim 19</b>                                                                                                                                                                                                                                           |                                                                                           |
| The watch of claim 16, further comprising a compressible layer disposed below the fingerprint sensor, the compressible layer compressing to receive a displacement or a deflection of the input member upon receipt of a user force to the input surface. |                                                                                           |
| <b>Claim 20</b>                                                                                                                                                                                                                                           |                                                                                           |
| The watch of claim 16, further comprising an electrical isolation sheet disposed between the button housing and the enclosure.                                                                                                                            |                                                                                           |

## LIST OF EXHIBITS

|            |                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPLE-2001 | Memorandum: Interim Procedure for Discretionary Denials in AIA Post - Grant Proceedings with Parallel District Court Litigation (June 21, 2022)                                                       |
| APPLE-2002 | Plaintiff Apple Inc.'s Disclosure of Asserted Claims and Infringement Contentions, <i>Apple Inc. v. AliveCor, Inc.</i> , 22-CV07608-HSG (N.D.Cal Jul. 25, 2023)                                       |
| APPLE-2003 | Declaration of Michael Amon                                                                                                                                                                           |
| APPLE-2004 | Transcript of April 13, 2024 deposition of Dr. Ronald D. Berger                                                                                                                                       |
| APPLE-2005 | Ahmer Syed, "Packaging Challenges for the Next Generation of Mobile Devices," IMAPS 2017 KEYNOTE SLIDES, 50th International Symposium on Microelectronics - Raleigh, NC USA, Oct. 9-12, 2017 ("Syed") |
| APPLE-2006 | U.S. Patent Publication No. 2017/0032169 ("Pi")                                                                                                                                                       |
| APPLE-2007 | U.S. Patent No. 8,031,186 ("Oestergaard")                                                                                                                                                             |
| APPLE-2008 | Order Granting Motion to Stay, <i>Apple Inc. v. AliveCor, Inc.</i> , 4-22-cv-07608 (NDCA Dec. 29, 2023)                                                                                               |
| APPLE-2009 | Declaration and Curriculum Vitae of Dr. Brian Anthony                                                                                                                                                 |

## **I. INTRODUCTION**

AliveCor’s Reply (“Reply”) fails to meaningfully address deficiencies identified in Apple’s Patent Owner Response (“POR”). The Reply instead rehashes the flawed arguments offered in the Petition, and in doing so, mischaracterizes several aspects of the record in attempting to cure these deficiencies. The Reply thereby confirms the discussion in the POR—the asserted prior art does not disclose or render obvious distinct requirements of the *button assembly* of claims 11 and 16 to (1) comprise a *fingerprint sensor*, (2) be *within [an] opening [along an exterior surface]/ disposed within [an] opening [formed in a sidewall]*, and (3) include a structural arrangement where *[a] portion of the flexible conduit* is *sandwiched* between (a) a *seal* and a *sealing surface*, or (b) the *seal* and the *surface of the opening*. The patentability of the Challenged Claims should therefore be confirmed.

## **II. KIM FAILS TO ANTICIPATE OR RENDER CLAIMS 11 AND 16 OBVIOUS (GROUNDS 1, 2)**

### **A. AliveCor’s “Single Invention” Characterization Contradicts Kim’s Express Disclosure**

AliveCor’s anticipation challenge based on Kim “fails as a matter of law because it combines two distinct embodiments, e.g., Kim’s Figure 10 and Figure 18 embodiments.” POR, 16.

Attempting to cure this deficiency, AliveCor now resorts to characterizing Kim as disclosing a “single invention.” *See* Reply, 1, 2, 4. But this contradicts Kim’s unambiguous disclosure of “various embodiments” of an “electronic device having a combined button implemented as a combination of a physical button and a virtual button...” Ex-1004, 2:29-34.<sup>1</sup> Kim also uses the term “embodiment” more than seventy times within its disclosure, further indicating that Kim describes several different embodiments rather than a “single invention.” AliveCor’s characterization is also unsupported by expert testimony, and relies entirely on attorney argument regarding Kim’s disclosure (which, as discussed above, references distinct “embodiments”).

AliveCor’s citation to *Chamberlain* is unable to save its anticipation theory based on Kim. *See* Reply, 1-2 (citing *Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1350 (Fed. Cir. 2019)). As acknowledged by AliveCor, *Chamberlain* explained that, for anticipation based on two embodiments within a single reference, a person of ordinary skill in the art (POSITA) would need to “at once envisage” the combination. *See* Reply, 1-2. But, absent generic broadening disclosures within Kim, AliveCor is unable to identify any specific teaching or

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<sup>1</sup> As explained in §II.B, AliveCor also misinterprets Kim’s descriptions of its “combined button.”

suggestion relating to Kim's Figures 10 and 18 embodiments that would have led a POSITA to envisage AliveCor's proposed combination. Instead, "[t]he most relevant disclosure relating to Kim's Figure 18 embodiment that contemplates a fingerprint sensor" is one that "provides no further indication that the fingerprint sensor would have included specific fingerprint sensing elements of the Figure 10 embodiment (e.g., fingerprint sensors 240p1, 240p2)[.]" POR, 30 (citing Ex-1004, 19:26-30). This is consistent with Dr. Anthony's testimony discussing the challenges to AliveCor's proposed combination. *See* APPLE-2009, ¶¶64-76.

**B. AliveCor Overplays Kim's Description of "Combined Button"**

Kim's disclosure of multiple distinct embodiments (with respect to the structure and positioning of button assemblies with an electronic device) is consistent with its use of the term "combined button." *See, e.g.,* Ex-1001, 2:42-3:25. Kim references the term "combined button" to generically refer to "a combination of a physical button and a virtual button." POR, 19 (citing Ex-1004, 2:30-34). Further, "Kim's usage of the 'combined button' term within the descriptions of its Figure 10 and Figure 18 embodiments does not itself suggest that Kim contemplates combining the teachings of each embodiment." *Id.*, 19.

AliveCor now asserts that "*Kim* teaches its 'combined button' can be placed anywhere on the device without modification." Reply, 3. And yet, AliveCor cannot identify within Kim a specific example of a "combined button" with the

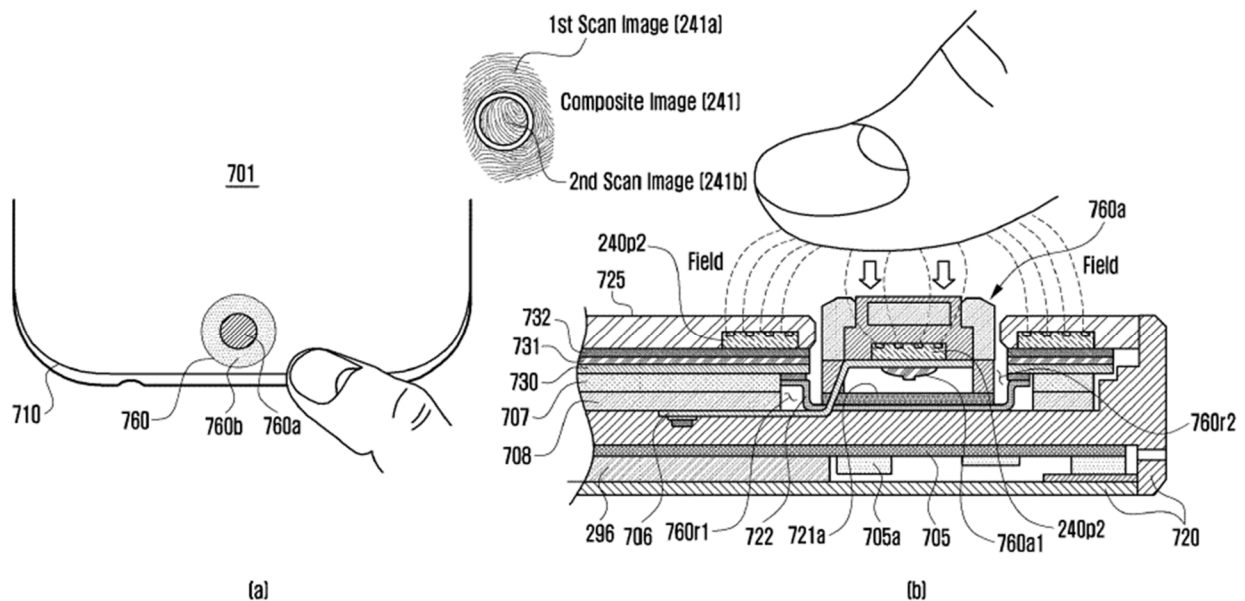
assembly components depicted in Figure 10 and placed in the position shown in Figure 18. *See* Ex-1004, 2:62-67, 3:1-3, 3:4-6, 3:29-30, 17:10-12, 17:23-30. As one example, AliveCor’s reference to 17:10-12 of Kim is irrelevant because this disclosure is focused on Kim’s Figure 6 embodiment and lacks the elements of the “combined button” example depicted in Figure 10. *See* Reply, 3-4.

**C. AliveCor Mischaracterizes Kim In Asserting That “Side Sensors” Of Kim’s Figure 10 Embodiment Are Optional**

The Petition’s application of Kim to the *fingerprint sensor* recited in [11.c.i] and [16.e.iii] is “substantively flawed[]” because “AliveCor identifies only one of two fingerprint sensors” within the “fingerprint sensor assembly of Kim’s Figure 10(b) embodiment.” POR, 33-34 (citing Ex-1004, 22:14-17).

AliveCor now points to three portions of Kim—specifically, 21:63-22:3, 22:14-17, and 22:18-27—and states that “Kim is plainly referring to optional side sensors.” Reply, 6. But even in 21:63-22:3, Kim describes that a “user fingerprint” is acquired/captured using “the first fingerprint sensor corresponding to the physical button 760a and the second fingerprint sensor corresponding to the virtual button 760b in the home button 760. Ex-1004, 21:63-22:3 (emphasis added). This is shown in Figure 10 of Kim below:

FIG. 10



Ex-1004, FIGS. 10(a) (left), 10(b) (right)

As noted above, 21:63-22:3 enumerates two distinct fingerprint sensors in relation to components depicted in Figure 10(a) (e.g., physical button 760a, virtual button 760b) arranged in a specific fashion. They are each *part of* the Figure 10 embodiment—not optional elements. Their removal, which AliveCor suggests is contemplated by disclosure relating to Figure 10, would materially alter functionality of the embodiment since it combines “fingerprint images 241a and 241b respectively obtained by the first and second fingerprint sensors into a single fingerprint image 241.” Ex-1004, 21:63-22:3. Indeed, Dr. Anthony testified that omission of one of these fingerprint sensors “contradicts how a POSITA would

have understood functionality of the fingerprint sensor assembly of Kim’s Figure 10 embodiment” because data collected by each is used to “generate a composite fingerprint image.” APPLE-2009, ¶79. Thus, record evidence—both from Kim and related expert testimony—confirms that AliveCor’s characterization of the “side sensors” being optional in the Figure 10 embodiment should not be credited.

### **III. THE JUNG-MYERS COMBINATION FAILS TO RENDER CLAIMS 11 AND 16 OBVIOUS (GROUND 3)**

#### **A. AliveCor’s Motivation to Combine Presumes Jung Contemplates Button Assemblies with Fingerprint Sensors**

AliveCor’s obviousness challenge based on the Jung-Myers combination fails because “a POSITA would not have sought out Myers disclosure of fingerprint sensor assemblies because Jung does not contemplate any button assembly with an incorporated fingerprint sensor.” POR, 38-39 (citing APPLE-2009, ¶82).

AliveCor now asserts that “[t]he *Myers* button structure is precisely the type of” key that “Jung explicitly contemplates being used with its key-waterproof structure.” Reply, 13. But AliveCor is unable to substantiate this position with any teaching or suggestion within Jung for incorporating a fingerprint sensor within its button assembly. Rather, it is forced to point to broadening disclosure that Jung’s button assembly may be applied to “keys for performing various functions,” but fingerprint sensing is not listed as one of those functions. *Id.*

(citing Ex-1005, [0123]). The other portions of Jung cited in the Reply fare no better. *See* Ex-1005, [0012], [0037], [0060], [0122].

The purported motivations identified in the Reply also starkly contrast the broadening disclosure within Jung relied on by AliveCor. For example, AliveCor purports that “a POSITA would have known it was important to seal a fingerprint sensor to protect its electronic circuitry.” Reply, 12-13. But again, this presupposes a POSITA reviewing Jung would have been concerned with improvements to fingerprint sensors. This would not be the case since Jung’s disclosure of fingerprint sensors is “limited to a single paragraph relating to a ‘sensor module 240[,]’” “amongst several types of sensing elements,” and includes some sensors that “a POSITA would have not perceived relevant to button assemblies.” POR, 38-39 (citing Ex-1005, [0060]); *see* APPLE-2009, ¶83.

AliveCor also posits that Myers’ teachings improve Jung’s button assembly by providing “additional sealing,” which “would further achieve the known goal of preventing ingress of potentially damaging moisture and dust.” Reply, 17. For evidentiary support, AliveCor points to paragraph 242 of the Berger Declaration, which states “a person of ordinary skill in the art would have been motivated to **waterproof Meyers’s ‘fingerprint sensor’ button assembly using Jung’s ‘key-waterproof structure’.**” Ex-1003, ¶287 (emphasis added); *see* Reply, 15. To the extent that “additional sealing” is deemed to provide any benefit, Dr. Berger

testified that such improvement would have been provided to Myers based on the teachings of Jung (i.e., Myers *in view of* Jung). This is not a combination proposed in the Petition. The discrepancy also “suggests hindsight bias in combining the teachings of Jung and Myers to satisfy requirements of the **button assembly**.” *See* POR, 40. Regardless, AliveCor’s logic fails because Myers already teaches a “gasket 1025” that “may form a seal” for waterproofing, and AliveCor does not explain what it believes is “additional sealing.” *Id.*

**B. The Jung-Myers Combination Still Fails To Satisfy The Requirements of Limitations [11.a], [11.c], [11.c.i], [16.a], And [16.e]**

Beyond a lack of motivation to combine, the Jung-Myers Combination is also substantively defective because “[t]he Petition fails to establish that the button assembly provided by the combination would have been positioned in either an ***opening [along an exterior surface] or an opening [formed in a sidewall]***.” POR, 45 (citing APPLE-2009, ¶95).

In the Reply, AliveCor initially cites to the same broadening disclosure in Jung discussed above—the button assembly being applied to “other keys for performing various functions” (Reply, 18). This description, alone, is insufficient to disclose or suggest positioning within a sidewall, particularly since Jung primarily describes its button assembly as a “home-key.” AliveCor then cites to Jung’s reference to a “wrist watch,” which, according to AliveCor, “a POSITA

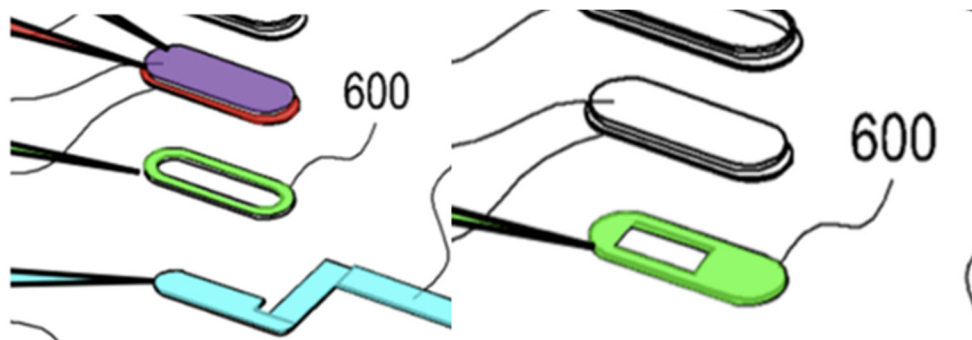
would have understood includes a key located in a sidewall.” Reply, 18-19 (citing Ex-1005, [0037]). But paragraph [0037] of Jung discusses a wrist watch amongst various electronic devices, including those that have no relevance to the ’619 patent, and does not explain why a POSITA would have understood this example to include a “key located in a sidewall.” Worse, this paragraph fails to address positioning of button assemblies within a wrist watch. Because AliveCor is focused on the claims of the ’619 patent, it seems to have disregarded that a button assembly may also be implemented in a front face of the wrist watch (consistent with other disclosures in Jung). And these configurations would not satisfy the requirement of claims 11 and 16 for a button assembly that is positioned in a specific manner.

#### **IV. CHANG FAILS TO ANTICIPATE OR RENDER CLAIMS 11 AND 16 OBVIOUS (GROUND 4)**

##### **A. AliveCor’s Alteration Of Sealing Member 600 Is Not Congruent With Chang**

AliveCor’s anticipation and obviousness challenges based on Chang are deficient because they either rely on “an embodiment in Chang that fails to satisfy all requirements of the *button assembly*” or “fail[] to sufficiently address how a POSITA would have arranged elements of Chang to achieve the *button assembly*.” POR, 20.

AliveCor now characterizes Chang as teaching a “non-annular sealing member,” and purports that “when sealing member 600 is implemented in a non-annular shape, there is ‘sandwich[ing]’ (element s [11.g], [16.g]).” Reply, 19-20. To be clear, 14:24-29 of Chang (leveraged by AliveCor for its purported disclosure of the “non-annular sealing member”) merely describes an “*alternative*[.]” implementation.” Reply, 19-20 (citing Ex-1015, 14:24-29, and Pet. 92). What 14:24-29 fails to describe, however, is the *specific* alterations proposed in the Petition to achieve satisfaction of limitations [11.g] and [16.g]. See APPLE-2009, ¶48. Those alterations modify the original sealing member 600 depicted in Chang’s Figure 3 (depicted on the left below) to “have a solid structure with a rectangular window” (depicted on the right below). POR, 51.



POR, 51 (citing Pet. at 78 and 90)

As shown above, the alterations require two modifications: (1) to the shape (from annular to non-annular), and (2) to the size and shape of the opening (reduction in

size, change from oval to rectangular window). Even if AliveCor's interpretation of 14:24-29 (as suggesting non-annular sealing members) is credited, there is no teaching or suggestion within this portion of Chang for the other modifications.

The Reply cites to several other portions of Chang, but they all fail to address the modified opening. *See* Ex-1015, 10:13-21, 10:32-42, 10:59-11:3, 11:36-41.

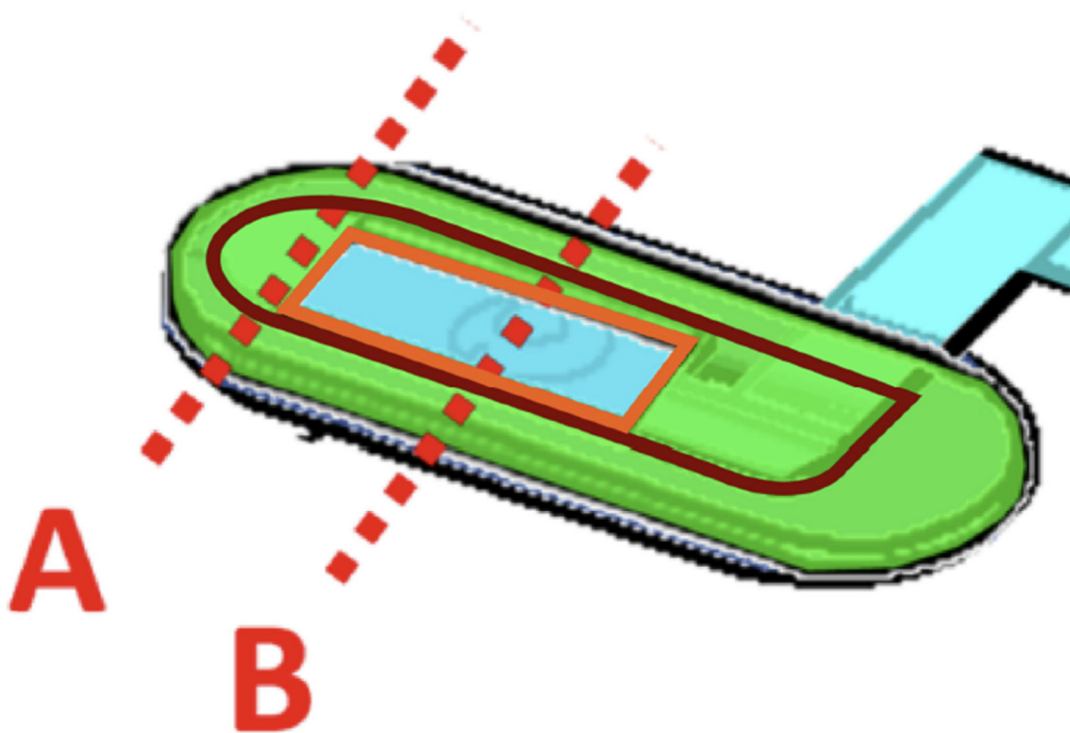
AliveCor therefore "fails to provide any indication that a POSITA would have arrived at the Chang Combination based on the teachings within Chang." POR, 24.

AliveCor also attempts to address Dr. Anthony's testimony regarding the "several technical hurdles that would have rendered Chang inoperable." APPLE-2009, ¶110<sup>2</sup>; *see also id.*, ¶¶111-23. It does so by focusing on Chang's disclosure of electrical contacts between sealing member and circuit region 453 and then concludes that the "opening in non-annular sealing member 600 is sized to allow

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<sup>2</sup> Dr. Anthony explained that "when the Chang Combination is assembled, the circular portion of the conductive member 500 is required to be positioned below the sealing member 600 because the area defined by its boundaries...is **larger** than the area provided by the rectangular window..." APPLE-2009, ¶119 (emphasis added). This results in a stacking arrangement that fails to satisfy limitation [11.g] and [16.g].

electrical contact...” Reply, 21-22 (citing Ex-1015, 10:31-21). Even if true, this explanation does not address why the Petition modified the size of a circular portion of the conductive member 500, but failed to account for the size difference with the size of the rectangular window (or opening) on the altered sealing member 600. This is shown below:<sup>3</sup>



APPLE-2009, ¶119 (annotating an excerpted figure depicted on Pet. at 99)

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<sup>3</sup> According to AliveCor, “A” and “B” each represent cross-sections along particular portions of the structural arrangements shown in Chang’s Figure 3. Pet., 94-95.

Dr. Anthony testified that “AliveCor appears to have modified the size of the circular portion of the conductive member 500 when positioning the circular portion underneath the altered sealing member 600.” *Id.*, ¶119. And yet AliveCor modified the size of circular portion in a way that still prevents entry into the rectangular window.

Unable to address these defects, AliveCor now hedges by noting that conductive member 500 is “flexible and, when placed in compression during the assembly process would not result in a cavity...” Reply, 22. This statement is merely attorney argument and not supported by record evidence. It is also rebutted by Dr. Anthony’s testimony, which explained that “for the entire part of the conductive member 500 to be fit within the space/volume defined by the rectangular window of the altered structure of sealing member 600, conductive member 500 would need to be flowable or bulk deformable.” APPLE-2009, ¶114. Further, “[a] POSITA also would not have understood conductive member 500 to be flowable or bulk deformable because Chang describes that flexible conductive member 500 may include ‘a Flexible Printed Circuit Board (FPCB)’.” *Id.*, ¶115. *See* Ex-1015, 12:42-49.

**B. Even if Appropriate, AliveCor's Alteration Still Fails to Satisfy The Requirements Of Limitations [11.g] and [16.g]**

AliveCor's application of Chang to limitations s [11.g] and [16.g] is "deficient regardless of whether it includes the original sealing member 600 (depicted in Chang's Figure 3), or AliveCor's altered sealing member 600." POR, 60-61 (citing APPLE-2009, ¶124). For the sealing member 600 depicted in Chang's Figure 3 (i.e., the unaltered sealing member 600), the cross section shown in Figure 10 confirms that "a portion of conductive member 500 (highlighted in teal) is arranged co-planar with (i.e., not positioned below) the sealing member 600 (highlighted in green) and lower plate 470 (highlighted in blue)" and thereby fails to satisfy the *sandwiched* requirements of [11.g] and [16.g]. POR, 61-62.

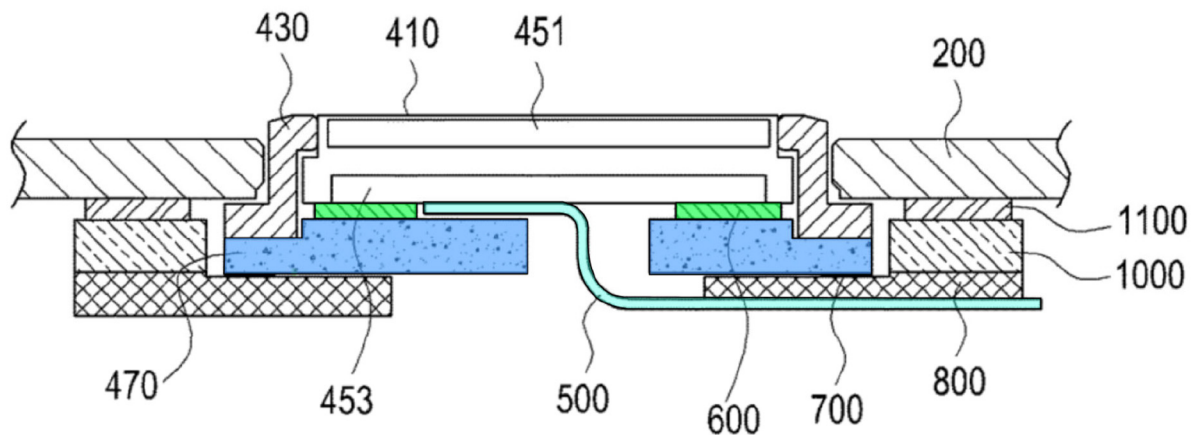
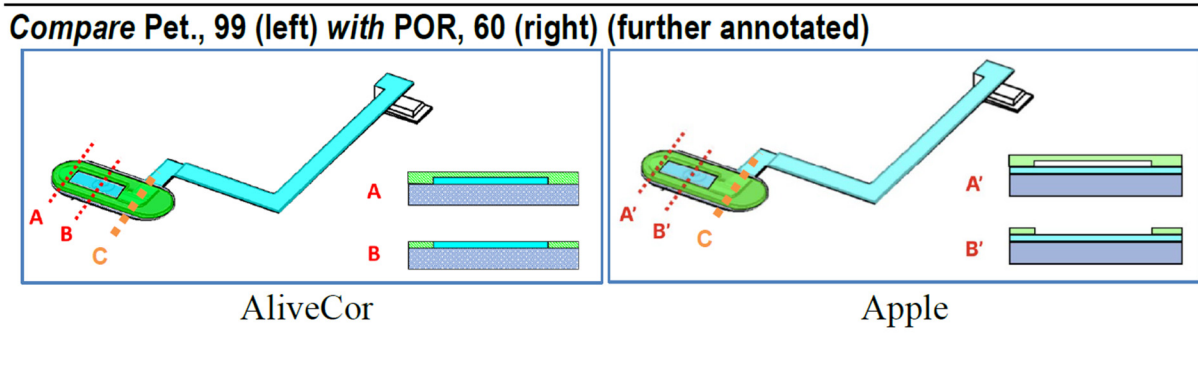


**FIG.10**

POR, 62 (annotating Ex-1015, FIG. 10)

The Reply misleadingly attributes the POR's discussion of Figure 10 to the altered sealing member and then states "Figure 10 is irrelevant because it illustrates a cross-sectional cut occurring at a different location, marked 'C' below..." See Reply, 24.



Reply, 24

As noted above, the POR's discussion of Figure 10 demonstrated that arrangement of the "the sealing member 600 depicted in Chang's Figure 3" (i.e., original, unaltered sealing member 600) and conductive member 500 is one that fails to satisfy the *sandwiching* requirements of limitations [11.g] and [16.g]. POR, 61. Setting this aside, the portrayal in page 24 of the Reply is still wrong because AliveCor disregards that a portion of conductive member 500 along the cross-section is still *below* a body of the altered sealing member (because, as altered, the sealing member has a solid body). In contrast, Figure 10 of Chang shows a coplanar arrangement of conductive member 500 and sealing member 600. See APPLE-2009, ¶126.

**V. CONCLUSION**

For the foregoing reasons, Patent Owner Apple respectfully requests a final written decision confirming patentability of the Challenged Claims.

Respectfully submitted,

Date: August 28, 2024

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**CERTIFICATION UNDER 37 CFR § 42.24(d)**

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Sur-Reply to Petitioner's Reply totals 2,739, which is less than the 5,600-word allowed under 37 CFR § 42.24(c)(4).

Respectfully submitted,

Date: August 28, 2024

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**CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6(e)(4), the undersigned certifies that on August 28, 2024, a complete and entire copy of this Patent Owner's Sur-Reply to Petitioner's Reply were provided via email, to the Petitioner by serving the email correspondence addresses of record as follows:

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