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June 16, 2023

***Via Email and U.S. First Class Mail***

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**Re: Response to Notice of Infringement of U.S. Patent Nos. 11,589,969, 11,589,970, D962,438, D962,439**

Dear Mr. Burnham:

This firm and the undersigned attorney represents Ascentcare Dental Products, Inc. (“Ascentcare Dental”) in its intellectual property matters. We have now had the opportunity to review your May 17, 2023 letter on behalf of Solmetex, LLC (“Solmetex”) regarding the alleged infringement of U.S. Patent Nos. 11,589,969 (“the ’969 Patent”), 11,589,970 (“the ’970 Patent”), D962,438 (“the ’438 Patent”), and D962,439 (“the ’439 Patent”) (collectively, “the Asserted Patents”).

Ascentcare Dental unequivocally rejects your assertion that Ascentcare’s Vaculux isolation mouthpieces (the “Accused Products”) infringe any valid and enforceable patent or other intellectual property right of Solmetex, including any claim of the Asserted Patents. There are numerous clear and unmistakable reasons why the Accused Products do not infringe the Asserted Patents and we question whether your client’s patents are valid or enforceable. Accordingly, we vehemently disagree with your allegations.

With respect to the merits of your allegations, your letter and the claim charts appended thereto extend far beyond the patent protection granted to Solmetex. Solmetex has no basis to assert an enlarged scope of protection in an attempt to encompass the distinguishable design of the Accused Products. Your letter alleges that the Accused Products are “configured as a pocket,” which they are clearly not as that term is used in the Asserted Patents. You further allege that the Accused Products include a bridge structure as recited in the claims, which again they do not. The Asserted Patents require connecting walls and corresponding edges between the first and second walls of the claimed mouthpieces, which are plainly absent from the Accused Products. Regarding the design patents, the Accused Products are unmistakably distinct such that no reasonable observer would consider the Accused products to be substantially the same so as to deceive the observer into believing it is the patented design.

Throughout the prosecution of the Asserted Patents, the pending claims were subject to extensive narrowing amendments that clearly disavowed and disclaimed substantial claim scope, further extinguishing any argument Solmetex

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may assert under the doctrine of equivalents. Nevertheless, the strained enlargement of claim scope necessary to encompass the Accused Products is unsupported by the written description and outside the scope of enablement of the Asserted Patents. Each of the Asserted Patents are addressed below to the extent you have alleged the Accused Products infringe.

**The Ascentcare Dental Accused Products Do Not Infringe The Solmetex Utility Patents**

**U.S. Patent No. 11,589,969**

Your May 17 letter asserts that the Accused Products infringe claim 19 of the '969 Patent. Claim 19 claims, in pertinent part, a dental mouthpiece including a main body portion configured as a pocket at least partially enclosing an interior space. The Accused Products do not have a main body portion configured as a pocket at least partially enclosing an interior space consistent with the usage of those terms in the disclosure and as argued prosecution of the '969 Patent. See, for example, the arguments presented in the Remarks filed Feb. 8, 2017; Sep. 5, 2017; Feb. 5, 2019; Jul. 1, 2020; Mar. 7, 2022. Claim 19 claims that the pocket is defined by a first wall having a shape defined by one or more edges along one or more sides, and a second wall having a shape that corresponds to the shape of the first wall. In the Accused Products, to the extent they can be said to have a first wall and a second wall, the shape of the accused second wall does not correspond to the shape of the accused first wall. See, for example, the arguments presented in the Remarks filed Feb. 8, 2017; Sep. 5, 2017; Feb. 5, 2019; Jul. 1, 2020; Mar. 7, 2022. Claim 19 further claims that the second wall is defined by one or more corresponding edges along one or more corresponding sides as the first wall. See, for example, the arguments presented in the Remarks filed Feb. 8, 2017; Sep. 5, 2017; Feb. 5, 2019; Jul. 1, 2020; Mar. 7, 2022. The Accused Products' accused second wall does not include a corresponding edge along any corresponding side.

Claim 19 claims a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall within the interior space of the pocket. The Accused Products do not include any bridge or other protrusions within any interior space to the extent that the Accused Products can be said to have an interior space. See, for example, the arguments presented in the Remarks filed Jan. 21, 2021, Mar. 7, 2022. Claim 19 further defines the protrusions of the bridge structure to protrude from the interior surface of the second wall toward the first wall in a wave shape comprising one or more crests and one or more troughs. The accused structure of Ascentcare Dentals' products does not include any wave shapes. Rather, the Accused Products include an outer edge having a series of separate and discrete circular recesses.

Claim 19 claims the main body of the dental mouthpiece to include a connecting wall that connects the one or more edges of the first wall to the one or more corresponding edges of the second wall (the edges/corresponding edges being defined earlier in the claim to be on a side of the first wall or second wall). See, for example, the arguments presented in the Remarks filed Feb. 8, 2017; Sep. 5, 2017; Feb. 5, 2019; Jul. 1, 2020; Mar. 7, 2022. The Accused Products does not include any connection between the accused first wall and accused second wall along any side of the accused main body portion.

**U.S. Patent No. 11,589,970**

The '970 Patent, as a continuation of the '969 Patent, uses many of the same terms in the same way as the '969 Patent and is limited by the statements made during the prosecution of the '969 Patent as well as the many narrowing amendments made during the prosecution of the '970 Patent. Your May 17 letter asserts that the Accused Products infringe claim 1 of the '970 Patent. The Accused Products do not infringe claim 1 of the '970 Patent for many of the same reasons that they do not infringe claim 19 of the '969 Patent. For example, claim 1 of the '970 Patent claims a mouth piece including a main body portion configured as a pocket at least partially enclosing an interior space. The Accused Products do not have a main body portion configured as a pocket at least partially enclosing an interior space. See, for example, the arguments presented in the Remarks filed Mar. 8, 2022.

Similar to claim 19 of the '969 Patent, claim 1 of the '970 Patent claims 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, and where the protrusions protrude in a wave shape. See, for example, the arguments presented in the Remarks filed Jan. 22, 2021; Jul. 29, 2021; and Mar. 8, 2022. The Accused Products do not have any structure integral with and protruding from an interior surface. The accused features designated in your claim chart clearly do not extend across the distance between the first wall and the second wall, a deficiency which you fail to cure or even address. And, as described above, the Accused Products do not include any protrusions that protrude in a wave shape.

Claim 1 of the '970 Patent also claims that the pocket of the main body portion is defined by a connecting wall that connects one or more edges of the first wall to one or more corresponding edges of the second wall. The Accused Products do not include a pocket as claimed, do not include corresponding edges of the first wall and the second wall and do not include a connecting wall that connects edges of the first wall and second wall. See, for example, the arguments presented in the Remarks filed Mar. 8, 2022.

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**The Ascentcare Dental Accused Products Do Not Infringe The Solmetex Design Patents**

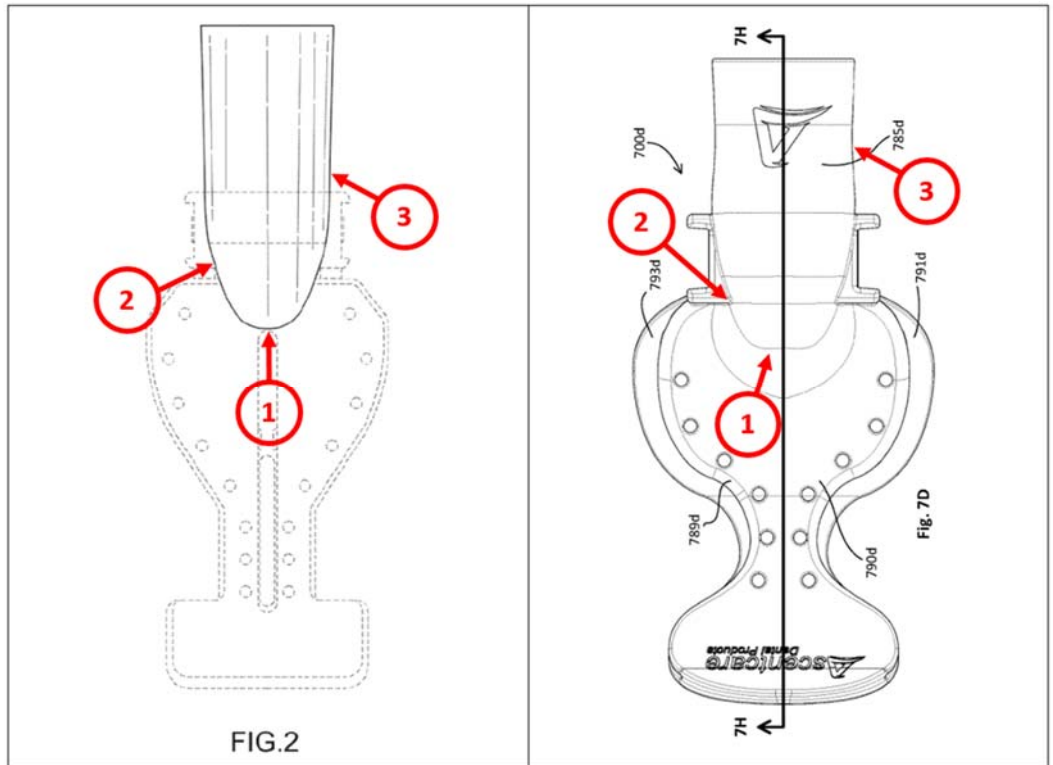
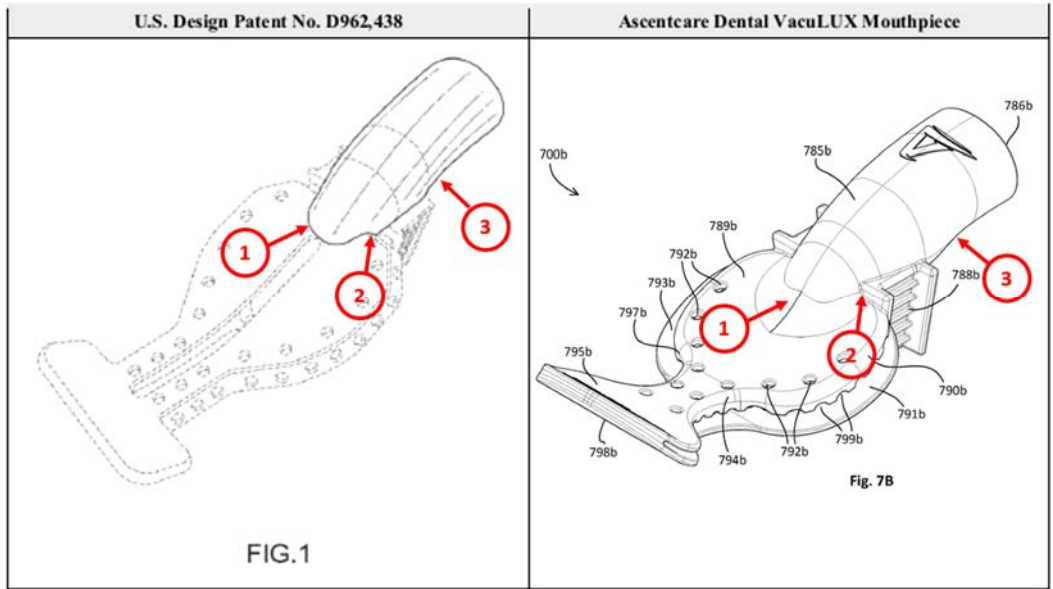
As with the claim charts for the utility patents, the claim charts for the design patents clearly demonstrate why the Accused Products do not infringe the Asserted Patents. Considering the functional features of the design, the functional purpose of the article as a whole, including its proportions, the design patent protects the ornamental aspects of the claimed design in relation to the accused design and the prior art. Considering the overall design and appearance of the Solmetex patented design in relation to the prior art and the Accused Products, infringement requires an ordinary observer, to believe that the accused design is the same as the patented design. Given the closeness of the prior art to the claimed design, an ordinary observer would not believe the Accused Products to be the same as the patented design because of their obvious differences.

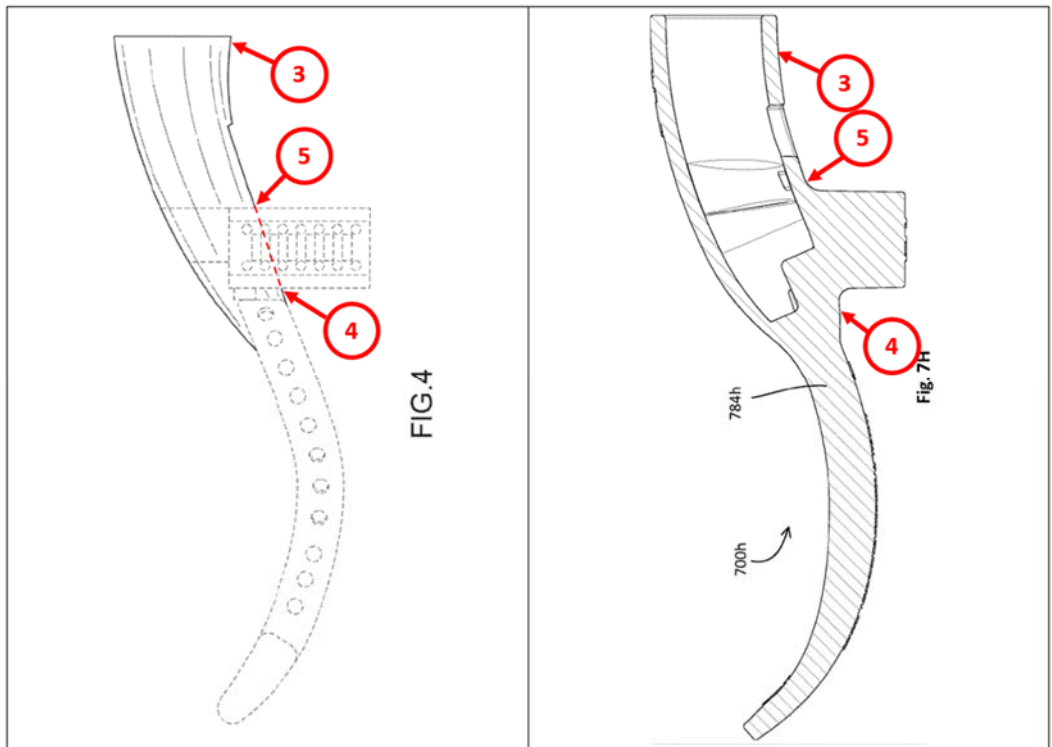
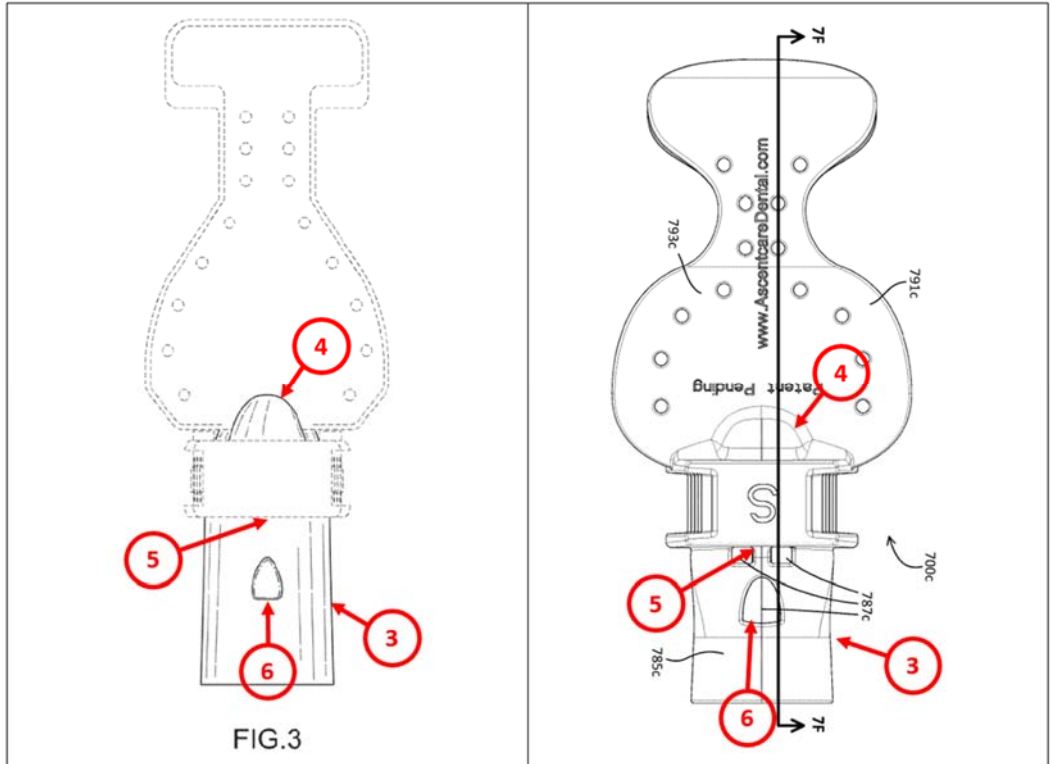
As a continuation of the Solmetex's U.S. Patent 8,911,232, the Solmetex design patents disclose a mouthpiece design including a mouth prop removable from the mouth piece. The design of the suction connector portion claimed in the '438 Patent and the design of the combination of the suction connector portion and the attachable mouth prop claimed in the '439 Patent are informed by the nature of this multi-piece construction. The design of the Accused Products, including an integral bite block and suction connector are distinguishable such that no ordinary observer, taking into account the prior art, would believe that the accused design is the same as the patented design. The individual figures of Solmetex's design patents are discussed below, pointing out distinguishing elements that contribute to the overall design and appearance of the Accused Product being different from the claimed design.

**U.S. Patent No. D962,438**

The '438 Patent claims the ornamental design for a mouthpiece shown in solid lines defining only the suction connector portion. Figure 1 of the '438 Patent illustrates the design from a perspective view. Your claim chart purports to provide a photo of a representative of the Accused Products in a similar perspective orientation, but given the flexible, translucent material, it is difficult to understand your allegations of infringement. To assist your understanding of the Accused Products' design and its differences with the claimed design, we provide the below charts detailing the Accused Products' design as illustrated in Ascentcare Dental's patent application publication No. US2021/0204923A1. The figures below are representative of the as-produced products.

The comparisons below illustrates the clear differentiation between the product designs.





1. The end of the suction connector portion in the '438 Patent (indicated at "1") has a defined edge where it connects to the main body of the mouthpiece. No such edge exists in the Accused Products, where the suction connector blends smoothly and continuously into the top surface of the main body portion. The apparent edge visible in your photos of the Accused Products are an interior transition from the suction connector to the open space of the main body of the mouth piece. Any attempt to arbitrarily designate a portion of the Accused Products as such an edge as required by the claimed design is inapposite and serves to demonstrate the difference between the claimed design and the Accused Products.
2. The '438 Patent's claimed design, owing to its intended arrangement for a removable mouth prop, extends in a particular fashion (indicated at "2") in the area of the mouth prop that is absent from the Accused Products. The Accused Products' suction connector, being integrated with the mouthpiece and bite is interrupted and drawn inward where the bite block extends up and into the suction connector profile.
3. The suction connector portion of the '438 Patent has a flared design where the cross-section gets larger toward the end opposite the main body of the mouthpiece in a continuous and linear fashion (indicated at "3" and best illustrated in FIGS. 2-4). The Accused Products include a suction connector that has a tapered profile past the bite block, with a constriction partway along the suction connector to accommodate attachment of multiple different adapters and connectors. Moreover, the suction connector is claimed in the Solmetex design patents as a smooth surface, where the Accused Products have additional ornamentation with the Ascentcare Dental logo embossed on the surface.
4. The '438 Patent defines an extension of the suction connector portion that extends toward the main body of the mouth piece (indicated at "4") that has a rounded profile (shown in FIG. 3) and that extends in a continuous plane on both sides of the mouth prop (shown in FIG. 4). The Accused Products do not include these design features. The Accused Products have a much blunter profile when viewed from the bottom, and when viewed from the side, the bottom edges of the suction connector are rounded into the bite block on both sides.
5. The '438 Patent defines the underside of the suction connector portion to be a smooth and continuous surface apart from the cutout (indicated at "5"). The Accused Products include additional receptacles to accommodate connection with other adapters or connectors.

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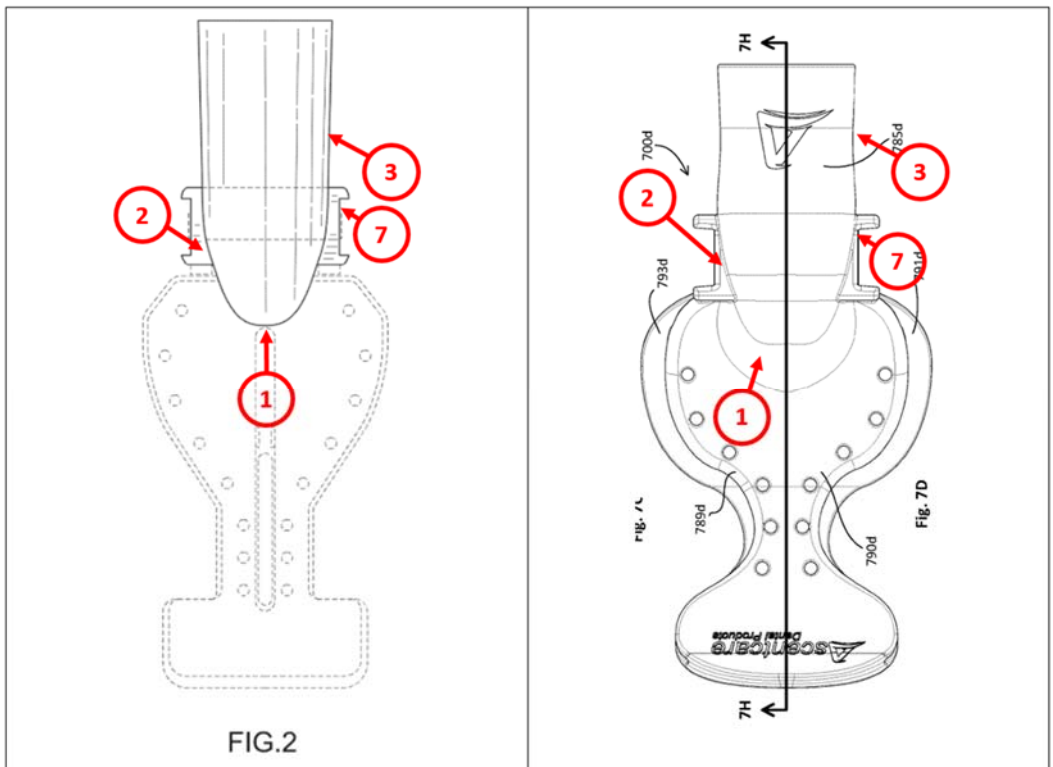
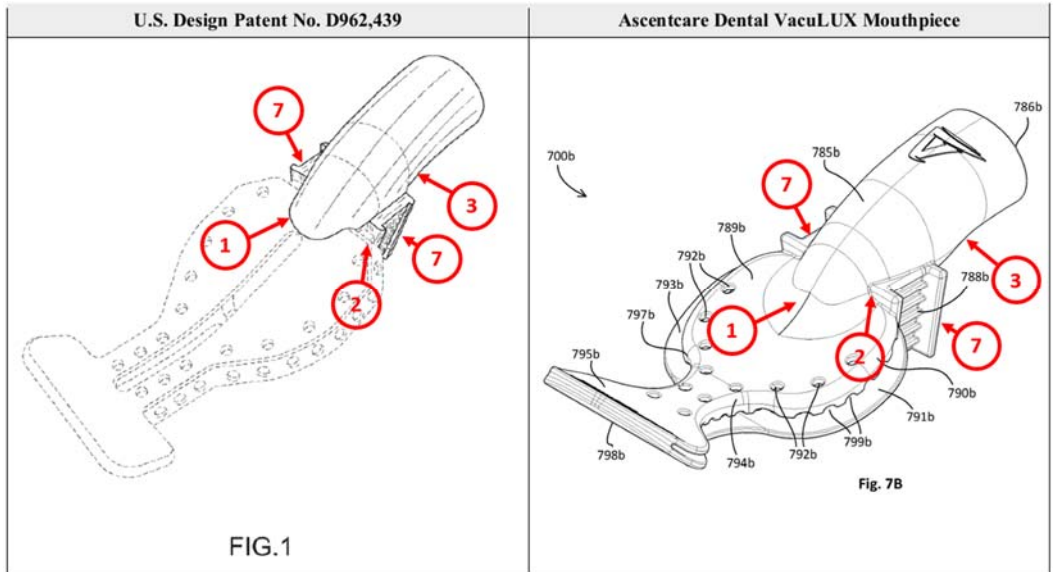
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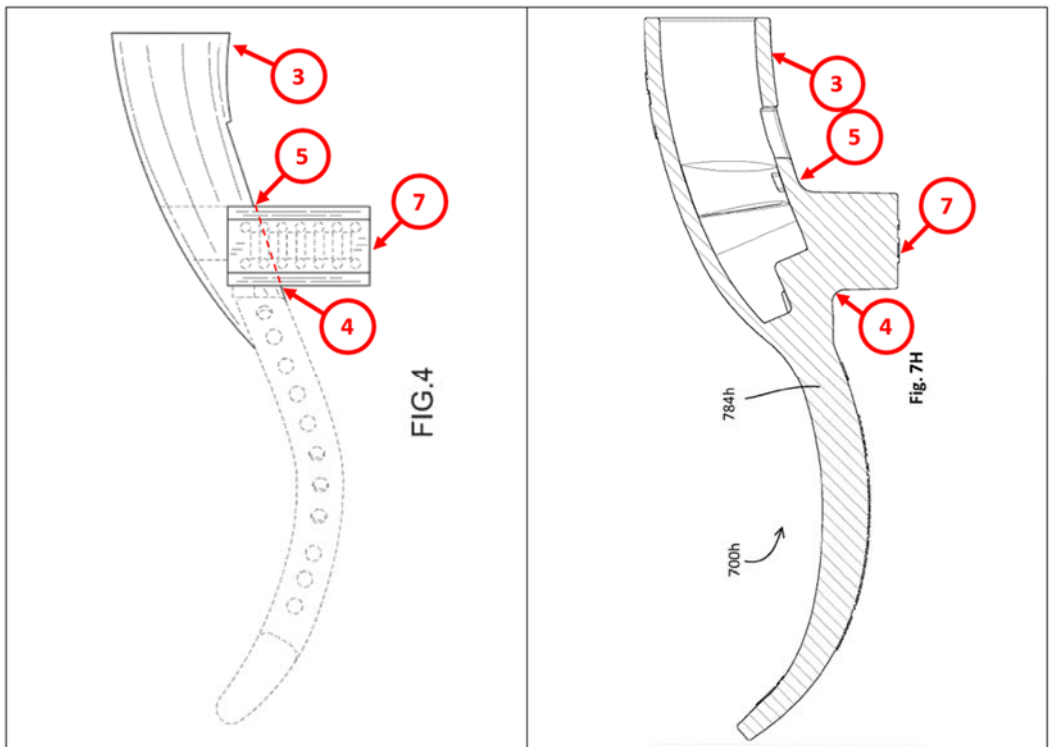
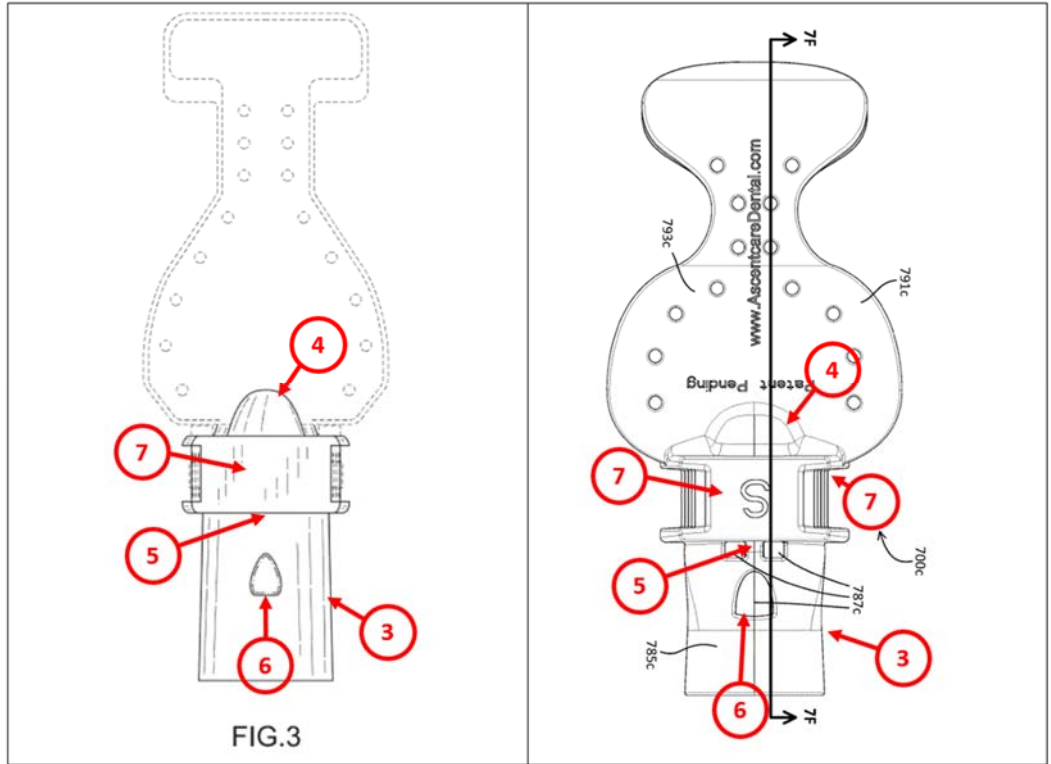
6. The cutout claimed in the '438 Patent (indicated at "6") has a defined shape and proportion relative the suction connector portion of the mouthpiece, that is absent from the Accused Product. While the Accused Products include a feature to facilitate connection with multiple connectors and adaptors, the feature has a different size, shape, and proportion relative to the overall product.

Taken together these distinctions, among others not mentioned, demonstrate that an ordinary observer would not be deceived into thinking that the Accused Products are the same as the patented design in the '438 Patent. Where the claimed design is close to the prior art designs, as is the case with the '438 Patent, even small differences between the accused design and the claimed design are important to the eye of the hypothetical ordinary observer.

#### **U.S. Patent No. D962,439**

Solmetex's '439 Patent claims the same design of a suction connector as in the '438 Patent, further combined with a mouth prop. Claiming the same ornamental design for the suction connector portion, the Accused Products therefore do not infringe the '439 Patent for all the same reasons presented above with respect to the '438 Patent, and so are not repeated. Regarding the mouth prop specifically, here again the design of the Accused Products are distinct from the claimed design in the '439 Patent. In the '439 Patent, the mouth prop (indicated at "7") has a different shape, size and proportion relative to the overall mouthpiece. The general shape of a mouth prop or bite block is well established in prior art, so even small differences are important to the eye of the hypothetical ordinary observer. The shape, surfaces, edges and proportions of the side walls of the bite block, along with the overall taper along the height of the bite block all serve to distinguish and separate the Accused Products from the design claimed in the '439 Patent. The '439 Patent also defines the bottom of the mouth prop to include a smooth surface whereas all of the Accused Products include an embossed size indicator raised from the bottom surface.





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This is not intended to be and should not be understood as a full recitation of all Ascentcare Dental's defenses, including additional areas of non-infringement and patent invalidity or unenforceability. Presumably intending to inflate your allegations, your letter asserts that Solmetex is the owner of "other intellectual property rights," including "additional Solmetex patents relevant to this matter." However, you fail to elucidate how the additional Solmetex patents are relevant to this matter. Therefore, Ascentcare Dental cannot assess or respond to such empty claims.

In addition to the many reasons why the Accused Products do not infringe the Asserted Patents, Ascentcare Dental questions whether the Asserted Patents are valid over the prior art, especially in view of the improperly expanded scope of the claims presented in your claim charts. Ascentcare Dental also questions whether Solmetex's statements, including those regarding the support for the designs claimed in the '438 and '439 Patents, amount to inequitable conduct, rendering not only those design patents but other related patents unenforceable. As you are surely aware, Courts have awarded costs and attorneys' fees under 35 U.S.C. § 285 to accused infringers where a patent owner's litigating position stands out from others with respect to substantive strength. Considering the clear and unmistakable lack of infringement of the Asserted Patents by the Accused Products, continued pursuit of the present allegations would certainly stand out from cases where a patent owner conducts reasonable pre-filing due diligence and can articulate a good faith basis for asserting infringement.

We trust that this response fully addresses all matters raised in your May 17 letter. Ascentcare Dental considers this matter fully resolved. If you continue to engage in this misdirected campaign, we will counsel our client to pursue all available legal remedies.

Regards,



Peter A. Cummings  
Attorney

PAC:hc

cc: Christopher J. Worrel, Esq. (Via Email)  
Christopher J. Zdarsky, Esq. (Via Email)