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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
14/228,061 03/27/2014 Thien Nguyen INCEP-001COE 6191

28661 7590 12/04/2015
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EXAMINER

MAI, HAO D

ART UNIT PAPER NUMBER

3732

NOTIFICATION DATE DELIVERY MODE

12/04/2015

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Art Unit: 3732

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it currently contains legal phraseologies, e.g. "comprising". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3732

6. Claim 1-12, 17-18, and 20, are rejected under 35 U.S.C. 102(b) as anticipated by Rhoades (4,802,851).

Regarding claims 1-2, Rhoades discloses a dental mouthpiece 50 comprising a main body portion 50 configured as a pocket (i.e. interior of 50) having an interior defined by: an anterior/upper wall 52 having a shaped defined by an exterior edge (Figs. 1-4), a posterior/lower wall 52 (parallel and opposite sides 52) having a shape corresponding to the defined shape of the anterior/upper wall 52, wherein an exterior edge of the posterior/lower wall 52 corresponds to the exterior edge of the anterior wall. The mouthpiece 50 further comprises a detachable mouth prop 68 having a mouth prop 68 and a strap portion (opening 70).

As to claim 3, the claim language "by injection-molded" is a product-by-process recitation in a product claim. Even though product-by-process recitation is limited by and defined by the recited process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). In this case, Rhoades discloses the end product and the structures thereof as claimed as detailed above with all the essential portions forming the device as one piece. The burden is shifted to applicant to show an unobvious difference between Rhoades' device and the invention that would have resulted from the injection molding process.

As to claim 4, note a suction connector portion 62 capable of connecting the interior portion of the main body to a vacuum suction source (Fig. 1; column 3 lines 35-37, 48-50). **As to claims 5-7**, an external surface of the suction connector portion comprises a notch region 74 corresponding to the strap portion (opening of 70) and wherein an external surface of the strap

Art Unit: 3732

portion is substantially flush with a remaining external surface of the suction connector portion when the strap portion sits in the notch region. Note that the opening 70 corresponding to a plug 62 connected to the main body 50 (Fig. 1), and form a double layered tube thereby capable of providing additional crush-resistance and decrease compressibility during biting by a patient. **As to claims 8-9**, note a suction connector portion 62 capable of connecting the interior portion of the main body to a vacuum suction source (Fig. 1; column 3 lines 35-37, 48-50).

As to claims 10-11, and anterior and posterior walls comprise a plurality of perforations 54 wherein activation of a vacuum source associated with the main body draws fluids from an exterior of the main body through said perforations 54 (Fig. 1). **As to claim 12**, the mouthpiece 50 further comprises a cheek retractor portion, i.e. side scallops 56, capable of pressing against a cheek of a patient when placed in a mouth of the patient. Note that Rhoades discloses the mouthpiece 50 being formed of resilient elastomeric material (column 6 lines 21-27); therefore there is a resilience of such material such that the cheek retractor portion (side scallops 56) having a surface that applies pressure when bent, wherein it is inherent that the pressure is based on resilience of a material that forms the cheek retractor portion 56.

As to claim 17, the posterior wall further includes a stability bar 140 protruding from an interior surface thereof. **As to claim 18**, the claim language "by injection-molded" is a product-by-process recitation in a product claim. Even though product-by-process recitation is limited by and defined by the recited process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). In this case, Rhoades discloses the end product and the structures thereof as claimed as detailed above with all essential portions forming the device

Art Unit: 3732

as one piece. The burden is shifted to applicant to show an unobvious difference between Rhoades' device and the invention that would have resulted from the injection molding process.

As to claim 20, the mouth prop 68 is detachable and therefore is inherently interchangeable with a second mouth prop.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades in view of Black (2009/0274991).** Rhoades discloses the invention substantially as claimed except for a bridge structure comprising a plurality of protrusions and wave-shaped bridge structure. Black et al. discloses an intraoral suction device comprising a wave-shaped bridge structure 48c having formed therein the interior wall of the device 40 (Fig. 3B; paragraph 80). Note that the troughs between bridges/transverse walls 48c allow for communication with the suction source. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Rhoades by forming such bridge/transverse walls therein the interior of the intraoral device as taught by Black et al. in order to reinforce the device while still allowing effective suction.

9. **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades in view of Sclafani (5,890,899).** Rhoades discloses the invention substantially as claimed

Art Unit: 3732

including the material used to form the device being flexible, translucent, high heat-resistant, as evidenced by disclosure of sterilization for reuse (column 5 lines 20-21; column 6 lines 21-27). However, Rhoades fails to disclose the material being silicone-base. Sclafani discloses a dental suction isolator device formed of silicone-based material (Figs. 1-9, column 8 lines 10-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Rhoades' device from silicone-based material as taught by Sclafani to be a known alternative suitable known material while yielding the same and/or predictable results.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Hao D. Mai whose telephone number is (571) 270-3002. The examiner can normally be reached on Monday-Friday 8:00AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Cris Rodriguez, at (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
Examiner, Art Unit 3732