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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 14/228,057, 03/27/2014, Thien Nguyen, INCEP-001COD, 1983
Row 2: 138718, 7590, 11/12/2021, [EXAMINER MAI, HAO D]
Row 3: [ART UNIT 3772] [PAPER NUMBER]
Row 4: [NOTIFICATION DATE 11/12/2021] [DELIVERY MODE 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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sfpatent@polsinelli.com
uspt@polsinelli.com

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 112

2. The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-2, 4-8, 14-16, and 21-30**, are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

- Claims 1 and 21 are incomplete for omitting essential elements and/or essential structural cooperative relationships of elements, such omissions amounting to gaps between the necessary structural connections. See MPEP § 2172.01. The omitted element(s) and/or structural cooperative relationship(s) are: the connecting wall connecting the first wall to the second wall **along the exterior edges thereof**, defining the interior space, as disclosed in the Application Figs. 1A and 2A.

Currently, the claims allow for misconstruction(s) of the invention, e.g. the mouthpiece may be an open misshaped article with the first and second

walls randomly positioned, connected by a connecting wall which may merely be a thin truss between the first and a second walls.

- Claims 1 and 21 each recites the limitation “the protrusions” (claim 1 line 19; claim 21 line 14), which lacks sufficient antecedent basis in the claims. Note that the claims define antecedent basis “a plurality of protrusions”.
- Claim 22 recites “the protrusions” which lacks sufficient antecedent basis.

All dependent claims are rejected herein based on dependency.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of pre-AIA 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.

5. **Claims 1-2, 4-8, 14-16, and 21-30, are rejected under 35 U.S.C. 102(b) as being anticipated by Hirsch (2006/0063129).**

Regarding claim 21, Hirsch discloses a mouth piece 20 comprising a main body 20 having a first end (best pointed by reference 50 in Fig. 2) opposite a second end (best pointed by reference numeral 22 in Fig. 2); the first end is wider than the second end.

The main body comprises: a first wall 56 (Fig. 8A) extending from the first end to the second end; a second wall 24 at a distance from the first wall 56, the distance corresponding to a space 34 between the first wall 56 and the second wall 24 (Figs. 8A-8B). The second wall 24 also extends from the first end to the second end (Fig. 2)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Dryshield, LLC
INVENTOR(S): Thien Nguyen, et al.
APPLICATION NO.: 14/228,057
FILED: March 27, 2014
TITLE: INTRAORAL DEVICE WITH SLIT
EXAMINER: Hao D. Mai
ART UNIT: 3772
CONF. NO.: 1983
ATTY.DKT.NO.: INCEP-001COD

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RESPONSE I

Examiner Mai:

In response to the office action mailed May 5, 2021 (*Office Action*), please consider the following amendments and remarks.

Amendments to the claims begin on page 2.

A summary of examiner interview begins on page 7.

Remarks and conclusion begin on pages 8 and 12, respectively.

IN THE CLAIMS

PLEASE AMEND THE CLAIMS AS FOLLOWS:

1. (currently amended) A mouthpiece comprising:

a main body having a first end opposite a second end, the main body ~~including a pocket~~ having an interior space, wherein the main body is configured in a shape wider at the first end and narrower at the second end, wherein the main body comprises:

a first wall defined by an exterior edge, the first wall comprising a slit opening extending a longitudinal length parallel to a longitudinal and central axis of the main body, the longitudinal length extending from a middle location of the first wall away from the first end and toward the second end of the main body, the slit opening allowing fluids exterior to the ~~pocket~~ interior space to enter along the longitudinal length into the interior of ~~the pocket~~ space,

a second wall defined by an exterior edge that corresponds to the exterior edge of the first wall, the second wall at a distance from the first wall, the distance corresponding to a span of the interior space, and

a connecting wall that connects the first wall to the second wall across the span of the interior space;

a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the ~~main body~~ second wall, the bridge structure extending ~~a distance between~~ through the interior space towards the first wall ~~and the second wall~~, wherein the bridge structure is not attached to the first wall, and wherein the protrusions of the bridge structure protrude in a wave shape comprising one or more crests and one or more troughs.

2. (previously presented) The mouthpiece of claim 1, wherein the second wall further includes a stability bar protruding from the interior surface of the second wall and along the longitudinal and central axis of the main body, the stability bar aligned with the slit.

3. (cancelled)

4. (previously presented) The mouthpiece of claim 1, wherein the main body is formed by injection-molding as one piece.

5. (previously presented) The mouthpiece of claim 1, wherein a material used to form the main body is a flexible, translucent, high heat-resistant, autoclavable silicone-based material.

6. (previously presented) The mouthpiece of claim 1, wherein the first wall and the second wall have different thicknesses.

7. (currently amended) The mouthpiece of claim 1, wherein flexibility of material of the first wall allows portions of the first wall to be pulled open at the slit to expose the interior ~~of the~~ pocket space.

8. (previously presented) The mouthpiece of claim 1, further comprising a cheek retractor portion connected to the second end of the main body, the cheek retractor portion having a surface that applies pressure when bent, wherein the pressure is based on resilience of the cheek retractor portion.

9. (cancelled)

10. (currently amended) The mouthpiece of claim 1, wherein the plurality of protrusions of the bridge structure ~~protrudes from the interior surface of the second wall, wherein the protrusions do not attach to the first wall, wherein the protrusions~~ comprise a plurality of spaced contact points, and wherein spaces between the contact points are at troughs of the wave shape.

11. – 13. (cancelled)

14. (currently amended) The mouthpiece of claim 1, further comprising a suction connector portion configured to connect the interior of the ~~pocket~~ space to a vacuum source.

15. (previously presented) The mouthpiece of claim 1, further comprising a mouth prop injection-molded in one piece.

16. (previously presented) The mouthpiece of claim 15, wherein the mouth prop is detachable and comprises a bite block portion and a strap portion.

17. - 20. (cancelled)

21. (currently amended) A mouthpiece comprising:

a main body having a first end opposite a second end, the first end wider than the second end, the main body comprising:

a first wall extending from the first end to the second end,

a second wall at a distance from the first wall, the distance corresponding to a space between the first wall and the second wall, wherein the second wall also extends from the first end to the second end, [[and]]

a connecting wall that connects the first wall to the second wall across the distance between the first wall and the second wall; and

a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface ~~within the space between the first wall and~~ of the second wall, the bridge structure extending through the interior space towards the first wall, wherein the bridge structure is not attached to the first wall, and wherein the protrusions of the bridge structure protrude in a wave shape comprising one or more crests and one or more troughs;

a suction connector extending from the first end of the main body, wherein an evacuation conduit of the suction connector is in communication with the space between the first wall and the second wall; and

a cheek retractor at the second end of the main body.

22. (currently amended) The mouthpiece of claim 21, wherein the protrusions of the bridge structure ~~comprises~~ comprise a plurality of contact points corresponding to the crests of the wave shape, and wherein the troughs correspond to spaces between the contact points.

23. (previously presented) The mouthpiece of claim 21, wherein the first wall and the second wall are bendable, and wherein the bridge structure keeps the first wall separated from the second wall during suction.

24. (previously presented) The mouthpiece of claim 21, wherein at least one of the first wall and the second wall includes one or more perforations.

25. (previously presented) The mouthpiece of claim 21, further comprising a stability bar extending along a longitudinal axis of the main body between the first end and the second end, wherein a thickness of the stability bar reinforces a resilience of the main body.

26. (previously presented) The mouthpiece of claim 21, wherein the main body is formed by injection-molding as one piece.

27. (previously presented) The mouthpiece of claim 26, wherein at least one of the cheek retractor and suction connector is formed by injection-molding and integral with the main body.

28. (previously presented) The mouthpiece of claim 26, further comprising a stability bar extending along a longitudinal axis of the main body between the first end and the second end, wherein the stability bar is formed by injection-molding and integral with the main body.

29. (previously presented) The mouthpiece of claim 21, further comprising a mouth prop connected to the suction connector.

30. (previously presented) The mouthpiece of claim 21, wherein the suction connector includes a cutout configured to interlock with a corresponding protrusion of a vacuum adapter.

APPLICANT'S SUMMARY OF EXAMINER INTERVIEW

The Applicant's undersigned representative called the examiner by telephone (571-270-3002) and left voicemail messages to schedule an interview with the examiner to discuss the rejections of the *Office Action* on the following dates:

- June 17, 2021
- July 21, 2021
- July 27, 2021
- July 28, 2021
- August 3, 2021

As of today, the examiner did not return any of the foregoing telephone calls. On August 3, the Applicant's representative also submitted a USPTO Automated Interview Request for an examiner interview. The Examiner is invited to call Applicant's representative to schedule an interview regarding the present application.

REMARKS

Status of the Claims

Claims 1-2, 4-8, 10, 14-16, and 21-30 are pending. Claims 1, 7, 10, 14, 21, and 22 have been currently amended. Support for the amended claims can be found in at least paragraph [0040] and FIGs. 1E and 5 of the *Specification*. The amended claims reflect subject matter to which the Applicant believes it is entitled to claim. As such, no new matter has been added.

Rejections under 35 U.S.C. § 112

Claims 1-2, 4-8, 10, 14-16, and 21-30 are rejected under 35 U.S.C. § 112(b) as being indefinite for failing to particularly point out and distinctly claim the subject matter. *Office Action*, 2.

Specifically, claims 1 and 21 are rejected under 35 U.S.C. § 112(b) as being incomplete for omitting essential elements. *Id.* Claims 1 and 21 has been amended to incorporate ‘a connecting wall’ limitation, which relates to an element between the first and second wall.

Claim 1 is rejected under 35 U.S.C. § 112(b) as being incomplete for omitting essential structural cooperative relationships of elements. *Id.* at 3. Claim 1 has been amended in part as follows (emphasis added):

...

a second wall defined by an exterior edge that corresponds to the exterior edge of the first wall, **the second wall at a distance from the first wall**, the distance corresponding to **a span of the of the interior space**, and

a connecting wall that connects the first wall to the second wall across the **span of the interior space**;

a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall, the bridge structure **extending through the interior space towards the first wall**, wherein the bridge structure is not attached to the first wall, wherein the protrusions of the bridge structure protrude in a wave shape comprising one or more crests and one or more troughs.

The amendments to claim 1 establish the structural relationship between the first wall, the second wall, the bridge structure, the connecting wall, and the interior space.

Claims 2 and 10 are rejected under 35 U.S.C. § 112(b) for lacking sufficient antecedent basis in the claims. *Id.* Claim 1 has been amended to clarify the antecedent basis in claims 2 and 10.

Therefore, the amendments to claims 1 and 21 overcome the rejections under 35 U.S.C. § 112(b). Because each of the dependent claims incorporates by reference all the limitations of the independent claim from which it depends, the dependent claims are allowable for at least the same reasons. Withdrawal of the rejections under 35 U.S.C. § 112(b) is respectfully requested.

Rejections under 35 U.S.C. §§ 102, 103

Claims 1-2, 4, 6-8, 14-16, and 21-30 are rejected under 35 U.S.C. § 112(b) as being anticipated by *Black* (US Patent Publication 2009/0274991). *Id.* at 3. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Black* in view of *Hirsch* (U.S. Patent Publication 2003/0134253). *Id.* at 7. The Applicant respectfully disagrees and presents the following remarks.

Claim 1 has been currently amended to recite as follows (emphasis added):

a bridge structure that includes a plurality of protrusions integral with and protruding from an interior surface of the second wall, the bridge structure extending through the interior space towards the first wall, **wherein the bridge structure is not attached to the first wall**, wherein the protrusions of the bridge structure protrude in a **wave shape** comprising one or more crests and one or more troughs.

The recited limitations find support in the *Specification*, which describes “a bridge structure 180 on an interior surface” that includes a “wave-like protrusion that generally corresponds to the distance between the anterior and posterior walls extending substantially (within 1 mm) the full distance at its crest and substantially flush to the surface at its trough.” *Specification* at [0040]. In



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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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sfpatent@polsinelli.com
uspt@polsinelli.com

Office Action Summary

Application No.

14/228,057

Applicant(s)

Nguyen et al.

Examiner

HAO D MAI

Art Unit

3772

AIA (FITF) Status

No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01/27/2021.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) Claim(s) 1-2,4-8,10,14-16 and 21-30 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) Claim(s) ____ is/are allowed.
- 7) Claim(s) 1-2, 4-8, 10, 14-16, 21-30 is/are rejected.
- 8) Claim(s) ____ is/are objected to.
- 9) Claim(s) ____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) All b) Some** c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. ____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.
- 3) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 4) Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Terminal Disclaimer

2. The terminal disclaimer filed on 01/27/2021 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent Nos. 8,911,232 and 9,788,924 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

3. The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-2, 4-8, 10, 14-16, and 21-30**, are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claims 1 and 21 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being incomplete for omitting essential elements, such

omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a side wall connecting the first/anterior wall and the second/superior wall as disclosed in the Application Figs. 1A, 2A

Claim 1 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: how are the first wall, the second wall, and the bridge structure, related to the pocket.

Claims 2 and 10 each recites the limitation “the interior surface of the second wall”, which lacks sufficient antecedent basis in the claims. Note that the base claim 1 defines antecedent basis for “an interior surface of the main body” (line 24).

All dependent claims are rejected herein based on dependency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of pre-AIA 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.

6. **Claims 1-2, 4, 6-8, 14-16, and 21-30, are rejected under 35 U.S.C. 102(b) as being anticipated by Black et al. (2009/0274991).**

Regarding claim 21, Black et al. discloses a mouthpiece (Fig. 26A) comprising a main body 640 having a first end 640a opposite a second end 649, the first end wider