



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for 15/081,593 and 26158 7590, inventor Andries Don Sebastian, attorney WOMBLE BOND DICKINSON (US) LLP, examiner WILLETT, TARYN T, art unit 1747, notification date 03/02/2020, and 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):

BostonPatents@wbd-us.com
IPDocketing@wbd-us.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDRIES DON SEBASTIAN, MICHAEL F. DAVIS, and
ERCILIA HERNANDEZ GARCIA

Appeal 2019-002692
Application 15/081,593
Technology Center 1700

Before JEFFREY T. SMITH, GEORGIANNA W. BRADEN, and
JANE E. INGLESE, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–4, 6–12, and 15–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as RAI Strategic Holdings, Inc. (Appeal Br. 2.)

STATEMENT OF THE CASE

Appellant's invention is generally directed to aerosol delivery devices including an atomizer and an antimicrobial surface useful as electronic cigarettes. (Spec. 1.)

Claims 1 and 11 illustrate the subject matter on appeal and are reproduced below:

1. An aerosol production assembly comprising:

an aerosol precursor composition;

an atomizer; and

a body comprising a surface of which at least a portion includes a micro-pattern imparting at least one of hydrophobic and anti-microbial properties, wherein the surface does not include a chemical anti-microbial coating.

11. A method of forming an aerosol production assembly, the method comprising:

providing an aerosol precursor composition;

positioning an atomizer in fluid communication with the aerosol precursor composition;

forming a body including a micro-pattern, wherein forming the body does not include coating a surface of the body with a chemical anti-microbial coating; and

assembling the atomizer with the body, wherein at least a portion of the surface of the body includes the micro-pattern imparting at least one of hydrophobic and anti-microbial properties.

Appeal Br. 22–23, Claims Appendix.

The following rejections from the Examiner are presented for our review:

I. Claims 1–3, 6, 11, and 15–20 are provisionally rejected on the ground of nonstatutory double patenting as unpatentable over claims 4, 7, 8, 12, 17, and 18 of copending Application No. 15/597537.

II. Claims 11, 12, and 15–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Plojoux et al. (US 2017/0042243 A1, published Feb. 16, 2017) in view of Victor et al. (US 2011/0287203 A1, published Nov. 24, 2011).

III. Claims 1–4 and 6–10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Minskoff et al. (US 2014/0283859 A1, published Sept. 25, 2014) in view of Victor.²

OPINION

After review of the respective positions provided by Appellant and the Examiner, we AFFIRM the Examiner’s rejections under 35 U.S.C. § 103(a) and on the grounds of non-statutory obviousness-type double patenting. The Examiner has reproduced the rejections on appeal in the Examiner’s Answer. (Ans. 3–11.)

Obviousness-type double patenting

We summarily sustain the Examiner’s provisional rejection of claims 1–3, 6, 11, and 15–20 on the grounds of non-statutory obviousness-type double patenting as unpatentable over claims 4, 7, 8, 12, 17 and 18 of copending Application No. 15/597537 without further comment, because

² The Examiner has modified the rejection to no longer include U.S. Application Pub. No. 2003/0096083 to Morgan for simplification of the rejection. (Ans. 3–4, 9.)

Appellant does not contest this rejection (see Briefs generally). 37 C.F.R. § 41.37(c)(1)(iv); *see also* Manual of Patent Examining Procedure (MPEP) § 1205.02 (9th ed. Jan. 2018) (“If a ground of rejection stated by the examiner is not addressed in the appellant’s brief, appellant has waived any challenge to that ground of rejection and the Board may summarily sustain it, unless the examiner subsequently withdrew the rejection in the examiner’s answer.”).

Obviousness

The Examiner rejects claims 11, 12, and 15–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Plojoux in view of Victor.³

The Examiner finds Plojoux teaches a method of forming an aerosol production assembly that differs from the claimed invention by teaching the use of a coating to provide hydrophobic and antimicrobial properties to the substrate. (Ans. 7.) Plojoux teaches the need for the thermally conductive substrate to have hydrophobic properties to prevent tobacco from sticking to the heater element. Plojoux teaches “[s]uitable non-stick coating materials include polytetrafluoroethylene (PTFE), glass, and superhydrophobic materials that exhibit the so called ‘lotus effect’.” (Plojoux ¶ 13.) The Examiner determines the use of a coating is a recognized alternative to the use of an embossed surface to provide hydrophobic and antimicrobial properties. (Ans. 7.)

³ Appellant argues independent claims 11 and 18 together. *See generally* Appeal Briefs. Therefore, we select claim 11 as representative, and claims 12, 15–17, and 19–20 will stand or fall with claims 11 and 18. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds Victor describes the formation of micro-patterns on a substrate to provide super hydrophobic or self-cleaning properties. (Ans. 7; Victor ¶¶ 29–37.) Victor discloses the micro-patterns are suitable for utilization on a variety of products including consumer products and components of electronic equipment and appliances. (Victor ¶ 36.)

The Examiner concludes:

It would have been prima facie obvious to one of ordinary skill in the art to use the micro-pattern forming method of Victor with the method disclosed by Plojoux as a simple substitution of one known element for another. The prior art (of Plojoux) contains a known method for forming a self-cleaning surface to prevent liquid droplets from adhering to the atomizer body which differs from the claimed process by the substitution of a surface pattern forming method: the surface of both the claimed invention and the prior art is used with the same purpose of imparting the self-cleaning properties onto the surface of the body. However, Victor teaches a comparable method utilizing the substituted method of molding the body with an etched mold without coating a surface of the body with a chemical anti-microbial coating.

(Ans. 8.)

Appellant argues Plojoux is silent as to forming a body including a micro-pattern which imparts at least one of hydrophobic and anti-microbial properties as recited in independent claim 11 and providing the aerosol delivery device with a surface of which at least a portion includes a micro-pattern imparting at least one of hydrophobic and anti-microbial properties, wherein the surface does not include a chemical anti-microbial coating as recited in independent claim 18. (Appeal Br. 17.)

Appellant's arguments are not persuasive. Plojoux teaches the need for the thermally conductive substrate to have non-stick properties that will

prevent tobacco from sticking to the heater element. (Plojoux ¶ 13.) To achieve this objective Plojoux states “the thermally conductive substrate may comprise a nonstick coating” (Plojoux ¶ 13, emphasis added.) As such, a person of ordinary skill in the art would have recognized the suitability of utilizing other well-known techniques for providing nonstick, hydrophobic properties. Victor is exemplary of other known techniques—micro-embossing—that results in hydrophobic properties. (Victor ¶¶ 29–37.) A person of ordinary skill in the art would have reasonably expected that other recognized techniques for providing hydrophobic properties would have been suitable for use in the invention of Plojoux. *See In re O’Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988). (“For obviousness under § 103, all that is required is a reasonable expectation of success.”) Appellant has not directed us to evidence that establishes that the formation of micro-embossing in a substrate, which result in hydrophobic and antimicrobial properties, was unknown to persons of ordinary skill in the art prior to this invention.

Appellant argues Plojoux teaches away from forming a body with a surface that does not include a chemical anti-microbial coating, which is required in independent claims 11 and 18, and Victor would render Plojoux unsatisfactory for its intended purpose of using the chemical coating. (Appeal Br. 18–19.)

We do not agree. Appellant does not point to any passage in Plojoux that “criticize[s], discredit[s] or otherwise discourage[s]” forming a thermally conductive substrate having hydrophobic properties utilizing other known techniques. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (prior art does not teach away from claimed subject matter merely by

disclosing a different solution to a similar problem unless the prior art also criticizes, discredits or otherwise discourages the solution claimed). Thus, Appellant has not established that Plojoux teaches away from forming a substrate having hydrophobic properties utilizing embossing techniques. As stated above, Plojoux teaches the thermally conductive substrate should have hydrophobic properties that may be obtained utilizing a nonstick coating. Plojoux does not disclose or discourage the use of other techniques for obtaining hydrophobic properties. Appellant has not directed us to evidence that establishes why a person of ordinary skill in the art would have expected that the techniques described by Victor would not function to provide the same hydrophobic, non-stick properties to the thermally conductive substrate in the invention of Plojoux.

For the reasons expressed by the Examiner and those presented above, we determine that Appellant has not shown error in the rejection of independent claims 11 and 18. As the Examiner relies upon the same reasoning in rejecting dependent claims 12, 15–17, and 19–20 (Ans. 7–8), we similarly determine that Appellant has not shown error in the rejection of these claims.

The Examiner rejects claims 1–4 and 6–10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Minskoff in view of Victor.⁴

Appellant argues that the Examiner has not followed proper procedure

⁴ Appellant principally argues independent claim 1. *See generally* Reply Brief. Therefore, we select claim 1 as representative, and claims 2–4 and 6–10 will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

because the modified rejection presented in the Answer is improper. (Reply Br. 1–4.)

If an Examiner has procedurally erred, the remedy lies exclusively in petitioning the Director for supervisory review. 37 C.F.R. § 1.181; *cf.* 35 U.S.C. § 6(b) (giving substantive review powers directly to the Board). The Director of the United States Patent and Trademark Office, not the Board, supervises examination and Examiners. 35 U.S.C. §§ 3(a)(2)(A), 132(a).

The Examiner finds Minskoff teaches a method of forming an aerosol production assembly that comprises a mouthpiece formed from a silver impregnated thermoplastic elastomer to provide hydrophobic and antimicrobial properties to the mouthpiece substrate. (Ans. 4–5; Minskoff ¶ 127.) Minskoff teaches the antimicrobial mouthpiece is configured for contact with the mouth of a person. (Minskoff ¶ 109.) The Examiner finds Victor describes the formation of micro-patterns on a substrate to provide super hydrophobic or self-cleaning properties. (Ans. 5; Victor ¶¶ 29–37.) Victor discloses the micro-patterns are suitable for utilization on a variety of products including consumer products and components of electronic equipment and appliances. (Victor ¶ 36.)

The Examiner determines the use of an embossed surface to provide hydrophobic and antimicrobial properties would have been obvious to one of ordinary skill in the art. (Ans. 6.) The Examiner specifically states:

It would have been *prima facie* obvious to one of ordinary skill in the art to use the micro-pattern as disclosed by Victor upon the device of Minskoff to result in functionally equivalent surface having the claimed at least one hydrophobic and anti-microbial properties where a micro-pattern imparts said properties as a simple

substitution of one known element for another. The prior art (of Minskoff) contains a known aerosol production assembly having a surface of which at least a portion has anti-microbial properties imparted by silver impregnated thermoplastic material. The prior art differs from the claimed invention by the substitution of a micro-pattern on said surface used for the same purpose of imparting the self-cleaning, antimicrobial, hydrophobic properties as taught by the primary reference. However, Victor teaches such a surface having the same properties where said super-hydrophobicity is imparted by a micro-pattern structure formed on the surface by molding the body with an etched mold. The micro-pattern of Victor is used for the same purpose disclosed by Minskoff to impart hydrophobicity and anti-microbial properties in the surface upon which the pattern is applied.

(Ans. 6.)

Appellant argues Minskoff in view of Victor fails to teach at least a body comprising a surface of which at least a portion includes a micro-pattern imparting at least one of hydrophobic and anti-microbial properties, wherein the surface does not include a chemical anti-microbial coating, as recited in independent claim 1. (Reply Br. 4.) Appellant argues Minskoff achieves anti-microbial properties for the mouthpiece cover by using an anti-microbial material such as a silver-impregnated thermoplastic material.

(Reply Br. 4–5.) Appellant argues there is no motivation to modify Minskoff's naturally anti-microbial mouthpiece to include a micro-pattern to impart hydrophobic and/or anti-microbial properties. Appellant further argues Victor provides no disclosure that its textured surface could be used in an aerosol production assembly. (Reply Br. 5.)

Appellant's arguments are not persuasive of reversible error in the Examiner's rejection. Minskoff teaches an electronic aerosol generating

device utilizing an anti-microbial surface where the properties are imparted by utilizing a silver-impregnated thermoplastic material. Victor teaches another technique —micro-embossing— for providing a substrate with super-hydrophobic and anti-microbial properties. As such, a person of ordinary skill in the art would have recognized the suitability of utilizing other well-known techniques for providing nonstick, hydrophobic properties. A person of ordinary skill in the art would have reasonably expected that other recognized techniques for providing hydrophobic properties would have been suitable for use in the invention of Minskoff. The formation of the Minskoff device including micro-pattern substrates, formed by etched dies of Victor, to provide hydrophobic properties to the device of Minskoff would have been a substitution for the non-micro-patterned hydrophobic antimicrobial surface, would have been obvious to one of ordinary skill in the art as a simple substitution of one known hydrophobic substrate for another. Moreover, a person of ordinary skill in the art would have reasonably expected that the micro-pattern as formed by etched dies, such as described by Victor, would have been suitable for use in combination with the silver-impregnated thermoplastic material disclosed by Minskoff. As stated above, Victor discloses the micro-patterns are suitable for utilization on a variety of products including consumer products and components of electronic equipment and appliances. (Victor ¶ 36.) Minskoff discloses designs or other patterns may be visible on the outside of the mouthpiece. (Minskoff ¶ 109.) Consequently, a person of ordinary skill in the art would have reasonably expected that the micro-patterns described by Victor would have been suitable for use on the mouthpiece portion described by Minskoff.

For the reasons expressed by the Examiner and those presented above, we determine that Appellant has not shown error in the rejection of independent claim 1. As the Examiner relies upon the same reasoning in rejecting dependent claims 2–4 and 6–10 (Ans. 4–6), we similarly determine that Appellant has not shown error in the rejection of these claims.

DECISION

For the reasons set forth above and in the Answer, the decision of the Examiner is affirmed.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–3, 6, 11, 15–20		Nonstatutory Double Patenting	1–3, 6, 11, 15–20	
11, 12, 15–20	103(a)	Plojoux, Victor	11, 12, 15–20	
1–4, 6–10	103(a)	Minskoff, Victor	1–4, 6–10	
Overall Outcome			1–4, 6–12, 15–20	

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED