



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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/206,942	03/12/2014	Joshua H. Wurzer	CSS-33159.203	8145
72960	7590	10/18/2019	EXAMINER	
Casimir Jones, S.C. 2275 Deming Way Ste 310 Middleton, WI 53562			MELLER, MICHAEL V	
			ART UNIT	PAPER NUMBER
			1655	
			NOTIFICATION DATE	DELIVERY MODE
			10/18/2019	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):

docketing@casimirjones.com
pto.correspondence@casimirjones.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOSHUA H. WURZER

Appeal 2018-008869
Application 14/206,942
Technology Center 1600

Before DONALD E. ADAMS, RACHEL H. TOWNSEND, and
DAVID COTTA, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from Examiner's decision to reject claims 1–6 (Appeal Br. 3).² 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 “SC Laboratories, Inc.” (Appellant’s May 14, 2018 Appeal Brief (Appeal Br.) 3).

² Pending claims 7–19 stand withdrawn from consideration (Appeal Br. 3).

STATEMENT OF THE CASE

Appellant's disclosure "relates to concentrates obtained from extraction from Cannabis, preferably cannabinoid and/or terpene concentrates, and formulation of the concentrates, particularly for use for direct vaporization, infusion into edible matrices, in electronic inhalation devices, and as nutraceuticals" (Spec.³ 1: 9–12). Appellant's claim 1 is representative and reproduced below:

1. A tablet or capsule containing a cannabinoid concentrate as an active ingredient, said cannabinoid concentrate characterized in comprising at least 1% w/w of at least one cannabinoid compound selected from the group consisting of Cannabigerol (*E*)-CBG-C₅, Cannabigerol monomethyl ether (*E*)-CBGM-C₅ A, Cannabigerolic acid A (*Z*)-CBGA-C₅ A, Cannabigerovarin (*E*)-CBGV-C₃, Cannabigerolic acid A (*E*)-CBGA-C₅ A, Cannabigerolic acid A monomethyl ether (*E*)-CBGAM-C₅ A and Cannabigerovarinic acid A (*E*)-CBGVA-C₃ A); (±)-Cannabichromene CBC-C₅, (±)-Cannabichromenic acid A CBCA-C₅ A, (±)-Cannabivarichromene, (±)-Cannabichromevarin CBCV-C₃, (±)-Cannabichromevarinic acid A CBCVA-C₃ A); (–)-Cannabidiol CBD-C₅, Cannabidiol monomethyl ether CBDM-C₅, Cannabidiol-C₄ CBD-C₄, (–)-Cannabidivarin CBDV-C₃, Cannabidiorcol CBD-C₁, Cannabidiolic acid CBDA-C₅, Cannabidivarinic acid CBDVA-C₃); Cannabinodiol CBND-C₅, Cannabinodivarin CBND-C₃); Δ^9 -Tetrahydrocannabinol Δ^9 -THC-C₅, Δ^9 -Tetrahydrocannabinol-C₄ Δ^9 -THC-C₄, Δ^9 -Tetrahydrocannabivarin Δ^9 -THCV-C₃, Δ^9 -Tetrahydrocannabiorcol, Δ^9 -THCO-C₁, Δ^9 -Tetrahydrocannabinolic acid A Δ^9 -THCA-C₅ A, Δ^9 -Tetrahydrocannabinolic acid B, Δ^9 -THCA-C₅ B, Δ^9 -Tetrahydrocannabinolic acid-C₄ A and/or B Δ^9 -THCA-C₄ A and/or B, Δ^9 -Tetrahydro-cannabivarinic acid A Δ^9 -THCVA-C₃ A, Δ^9 -Tetrahydrocannabiorcolic acid A and/or B Δ^9 -THCOA-

³ Appellant's March 12, 2014 Specification.

C₁ A and/or B), (-)- Δ^8 -*trans*-(6aR, 10aR)- Δ^8 -Tetrahydrocannabinol Δ^8 -THC-C₅, (-)- Δ^8 -*trans*-(6aR, 10aR)-Tetrahydrocannabinolic acid A Δ^8 -THCA-C₅ A, (-)-(6aS, 10aR)- Δ^9 -Tetrahydrocannabinol (-)-*cis*- Δ^9 -THC-C₅); Cannabinol CBN-C₅, Cannabinol-C₄ CBN-C₄, Cannabivarin CBN-C₃, Cannabinol-C₂ CBN-C₂, Cannabiorcol CBN-C₁, Cannabinolic acid A CBNA-C₅ A, Cannabinol methyl ether CBNM-C₅, (-)-(9R,10R)-*trans*-Cannabitriol (-)-*trans*-CBT-C₅, (+)-(9S, 10S)-Cannabitriol (+)-*trans*-CBT-C₅, (\pm)-(9R, 10S/9S, 10R)-); Cannabitriol (\pm)-*cis*-CBT-C₅, (-)-(9R,10R)-*trans*-10-O-Ethyl-cannabitriol (-)-*trans*-CBT-OEt-C₅, (\pm)-(9R, 10R/9S, 10S)-Cannabitriol-C₃(\pm)-*trans*-CBT-C₃, 8,9-Dihydroxy- $\Delta^{6a(10a)}$ -tetrahydrocannabinol 8,9-Di-OH-CBT-C₅, Cannabidiolic acid A cannabitriol ester CBDA-C₅ 9-OH-CBT-C₅ ester, (-)-(6aR,9S,10S,10aR)-9,10-Dihydroxy-hexahydrocannabinol, Cannabiripsol, Cannabiripsol-C₅, (-)-6a,7,10a-Trihydroxy- Δ^9 -tetrahydrocannabinol (-)-Cannabitetrol, 10-Oxo- $\Delta^{6a(10a)}$ -tetrahydrocannabinol OTHC); (5aS,6S,9R,9aR)-Cannabielsoin CBE-C₅, (5aS,6S,9R,9aR)-Cannabielsoin CBE-C₃, (5aS,6S,9R,9aR)-Cannabielsoic acid A CBEA-C₅ A, (5aS,6S,9R,9aR)-Cannabielsoic acid B CBEA-C₅ B; (5aS,6S,9R,9aR)-C₃-Cannabielsoic acid B CBEA-C₃ B, Cannabiglendol-C₃ OH-iso-HHCV-C₃, Dehydrocannabifuran DCBF-C₅, Cannabifuran CBF-C₅), (-)- Δ^7 -*trans*-(1R,3R,6R)-Isotetrahydrocannabinol, (\pm)- Δ^7 -1,2-*cis*-(1R,3R,6S/1S,3S,6R)-Isotetrahydrocannabivarin, (-)- Δ^7 -*trans*-(1R,3R,6R)-Isotetrahydrocannabivarin); (\pm)-(1aS,3aR,8bR,8cR)-Cannabicyclol CBL-C₅, (\pm)-(1aS,3aR,8bR,8cR)-Cannabicyclic acid A CBLA-C₅ A, (\pm)-(1aS,3aR,8bR,8cR)-Cannabicyclovarin CBLV-C₃; Cannabicitran CBT-C₅); Cannabichromanone CBCN-C₅, Cannabichromanone-C₃ CBCN-C₃, and Cannabicumaronone CBCON-C₅); and

at least 0.1% w/w of at least one terpenoid selected from the group consisting of Alloaromadendrene, allyl hexanoate, benzaldehyde, (*Z*)- α -*cis*-bergamotene, (*Z*)- α -*trans*-bergamotene, β -bisabolol, *epi*- α -bisabolol, β -bisabolene, borneol (camphol), *cis*- γ -bisabolene, borneol acetate (bornyl acetate), α -cadinene, camphene, camphor, *cis*-carveol, caryophyllene (β -

caryophyllene), α -humulene (α -caryophyllene), γ -cadinene, Δ -3-carene, caryophyllene oxide, 1,8-cineole, citral A, citral B, cinnamaldehyde, α -copaene (aglaiene), γ -curcumene, β -cymene, β -elemene, γ -elemene, ethyl decdienoate, ethyl maltol, ethyl propionate, ethylvanillin, eucalyptol, α -eudesmol, β -eudesmol, γ -eudesmol, eugenol, *cis*- β -farnesene (*(Z)*- β -farnesene), *trans*- α -farnesene, *trans*- β -farnesene, *trans*- γ -bisabolene, fenchone, fenchol (norbornanol, β -fenchol), geraniol, α -guaiene, guaiol, methyl anthranilate, methyl salicylate, 2-methyl-4-heptanone, 3-methyl-4-heptanone, hexyl acetate, ipsdienol, isoamyl acetate, lemenol, limonene, d-limonene (limonene), linolool (linalyl alcohol, β -linolool), α -longipinene, menthol, γ -muurolene, myrcene (β -myrcene), nerolidol, *trans*-nerolidol, nerol, β -ocimene (*cis*-ocimene), octyl acetate, α -phellandrene, phytol, α -pinene (2-pinene), β -pinene, pulegone, sabinene, *cis*-sabinene hydrate (*cis*-thujanol), β -selinene, α -selinene, γ -terpinene, terpinolene (isoterpine), terpineol (α terpineol), terpineol-4-ol, α -terpinene (terpilene), α -thujene (origanene), vanillin, viridiflorene (ledene), and α -ylange.

(Appeal Br. 10–11.) In response to a restriction requirement, Appellant elected, the cannabinoids: cannabigerolic acid A (*Z*)-CBGA-C₅ A; cannabinol CBN-C₅; and cannabichromenic acid A CBCA-C₅ A and the terpenoids: Limonene, Myrcene, and Terpinolene (Final Act.⁴ 2).

⁴ Examiner's August 8, 2017 Final Office Action.

Grounds of rejection before this Panel for review:

Claims 1–6 stand rejected under 35 U.S.C. § 102(b) as anticipated by Freeman⁵ as evidenced by Cannabinoids in Cannabis⁶ and Casano.⁷

Claims 1–6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Freeman, Cannabinoids in Cannabis, and Casano.

FACTUAL FINDINGS (FF)

FF 1. Appellant defines “the term ‘concentrate’ when used in reference to a composition containing one or more compounds [to] mean[] that the one or more compounds are concentrated in the composition on a weight/weight basis as compared to a starting material, such as Cannabis plant material or trichomes” (Spec. 21: 9–12; *see* Ans. 4–5).

FF 2. Freeman discloses “compositions comprising powdered hemp seed, an emulsifier/dispersant such as lecithin (particularly soy lecithin), cannabis, and optionally other additives and excipients.” (Freeman ¶ 2; *id.* ¶ 9; *see generally* Ans. 4).

FF 3. Freeman defines the term “cannabis” as “natural compositions, typically resinous in nature, containing active cannabinoids, particularly THC (or THCA), separated from marijuana plants” (Freeman ¶ 28; *see generally* Ans. 4).

⁵ Freeman, US 2013/0295172 A1, published Nov. 7, 2013.

⁶ *Cannabinoids in Cannabis*, in The Canadian Consortium for the Investigation of Cannabinoids (2009).

⁷ Casano et al., *Variations in Terpene Profiles of Different Strains of Cannabis sativa L* (2011), available at <https://www.fundacion-canna.es/en/variaciones-terpene-profiles-different-strains-cannabis-s...> (last accessed July 29, 2015).

FF 4. Freeman discloses that “[d]oses of . . . [its] composition desirably are produced in the form of gel capsules or tablets containing a specific amount of THC” (Freeman ¶ 52; *see generally* Ans. 4).

FF 5. Casano discloses that “[t]he average relative contents of dominant compounds detected in the aroma volatiles of all the [cannabis] strains [in Casano’s study] were: β -myrcene ($46.1\pm 2.6\%$), α -pinene ($14.0\pm 1.5\%$), α -terpinolene ($10.2\pm 1.8\%$), limonene ($7.3\pm 1.3\%$), trans- β -ocimene ($6.6\pm 0.7\%$), β -pinene ($6.1\pm 0.4\%$), α -terpinene ($3.6\pm 1.0\%$), β -caryophyllene ($1.2\pm 0.2\%$), 1,8 cineole ($1.1\pm 0.2\%$), α -phellandrene ($0.7\pm 0.1\%$) and Δ -3-carene ($0.6\pm 0.1\%$)” (Casano Results and discussion; *see* Ans. 5).

FF 6. Cannabinoids in Cannabis discloses that “[t]he cannabis plant contains over 60 cannabinoid molecules” including “cannabinol,” “cannibichromene,” and “cannabigerol” (Cannabinoids in Cannabis, first paragraph).

FF 7. Cannabinoids in Cannabis discloses a first cannabis sample that comprises: 0.03% cannabidiol (CBD), 0.1% cannabichromene (CBC), and 0.54% cannabinol (CBN); a second cannabis sample that comprises: 0.47% CBD, 0.24% CBC, and 0.23% CBN; “one form” of cannabis comprising “up to 5.16% CBD;” and cannabis product wherein “CBD, CBG, CBN and CBC levels are below the lower limit of quantification” (Cannabinoids in Cannabis, fifth–sixth paragraphs).

Anticipation:

ISSUE

Does the preponderance of evidence on this record support Examiner's finding that Freeman as evidenced by Cannabinoids in Cannabis and Casano teaches Appellant's claimed invention?

ANALYSIS

Examiner finds that Freeman teaches Appellant's claimed invention, as evidenced by Cannabinoids in Cannabis and Casano (Ans.⁸ 4–7). In particular, Examiner reasons that Freeman's capsule reads “on a concentrate of cannabis . . . [because] the cannabis is combined with other ingredients” and, therefore, “technically the cannabis has been concentrated into a capsule” (Ans. 5; *see* FF 2–4). Stated differently, Examiner reasons that “mixing [Freeman's] . . . cannabis, hemp seed and lecithin will form a concentrate since by combining the ingredients together the cannabis will be concentrated (Ans. 5; *cf.* FF 1 (Appellant defines “the term ‘concentrate’ when used in reference to a composition containing one or more compounds [to] mean[] that the one or more compounds are concentrated in the composition on a weight/weight basis as compared to a starting material, such as Cannabis plant material or trichomes)).

Examiner relies on Casano to establish that cannabis inherently “contains limonene, myrcene and terpinolene (the elected terpenoids)” (Ans. 5; *see* FF 5). Examiner, therefore, reasons that because Casano discloses that cannabis contains more than 0.1% of the elected terpenoids, Freeman's

⁸ Examiner's July 27, 2018 Answer.

capsules comprising cannabis inherently comprise at least about 0.1% of Appellant's elected terpenoids (Ans. 5).

Examiner further relies on Cannabinoids in Cannabis to establish that cannabis inherently contains cannabigerolic acid A (Z)-CBGA-C₅ A, cannabinol CBN-C₅, and cannabichromenic acid A CBCA-C₅ A (Ans. 6; *see* FF 6). Examiner, therefore, asserts that because Freeman's capsule comprises cannabis, Freeman's capsule will necessarily comprise an amount of cannabinoids above 1%, because, according to Examiner, "cannabis is well known to have at least 1% of total cannabinoids in it" (Ans. 5–6).

The dispute on this record is limited to Examiner's interpretation of Appellant's claimed invention, specifically, Examiner reasons

that if the meaning of "at least 1% w/w of at least one cannabinoid compound . . . (selected from the recited group)" was intended to mean that each of the one or more cannabinoid compounds is at least 1%, then the phrase would recite "at least 1% w/w of each of at least one cannabinoid compound . . . (selected from the recited group)", but the claims do not recite this.

Another way of looking at this is to replace "at least one cannabinoid compound" with a definite number encompassed by the phrase. For example, "at least 1% w/w of two cannabinoid compounds . . . (selected from the recited group)". This clearly shows that a reasonable interpretation of such a phrase would be met by 1% w/w of the composition being made up of the combination of two of the compounds. The same logic would apply to three, four or more compounds.

(Ans. 13–14 (emphasis omitted, alteration original).) Therefore, based on Examiner's interpretation of Appellant's claim, Examiner concludes that because cannabis comprises cannabinoids in a total amount above 1%, adding up all of the cannabinoids in Freeman's capsule, which comprises cannabis, would read on a cannabinoid concentrate characterized in

comprising at least 1% w/w cannabinoid, including Appellant's elected cannabinoids, as set forth in Appellant's claim 1 (*see* Ans. 13; *cf.* Appeal Br. 10–11). On this record, we find no error in Examiner's interpretation of Appellant's claim 1. Therefore, we are not persuaded by Appellant's contention that notwithstanding Examiner's "misinterpretation of the claim language[,] [t]he plain meaning of the phrase 'at least 1% w/w of at least one cannabinoid compound selected from the group consisting of . . . ' means that the concentrate must comprise at least 1% w/w of the individually listed cannabinoid compounds." Thus, under "the plain meaning of the claim language, the 1% w/w threshold may not be reached by adding up the weight percentages of the cannabinoids as the Examiner suggests" (Appeal Br. 7 (alteration original); *see also* Reply Br. 2–3).

CONCLUSION

The preponderance of evidence on this record supports Examiner's finding that Freeman as evidenced by Cannabinoids in Cannabis and Casano teaches Appellant's claimed invention. The rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Freeman as evidenced by Cannabinoids in Cannabis and Casano is affirmed. Claims 2–6 are not separately argued and fall with claim 1.

Obviousness:

ISSUE

Does the preponderance of evidence relied upon by Examiner support a conclusion of obviousness?

ANALYSIS

Examiner relies on Freeman, Cannabinoids in Cannabis, and Casano as discussed above with respect to the anticipation rejection (*see* Ans. 7–9; FF 1–7). Based on the combination of Freeman, Cannabinoids in Cannabis, and Casano, Examiner concludes that, “[i]n the event it is seen that Freeman’s cannabis is not concentrated (which is not being admitted) then” at the time Appellant’s invention was made, it would have been *prima facie* obvious to concentrate Freeman’s cannabis because “one would want a concentrated form of the cannabis to be in a capsule to make the capsule more effective in treating pain as taught by Freeman” (Ans. 9). Further, although Examiner finds that the elected cannabinoids and terpenoids are inherently in Freeman’s composition, Examiner asserts that it would have been *prima facie* obvious to use a cannabis strain or a part of the cannabis plant containing the elected cannabinoids and terpenoids because they are medicinally useful as taught by Cannabinoids in Cannabis and Casano, respectively (*id.* at 10). We find no error in Examiner’s rationale.

Because we agree with Examiner’s claim interpretation, we are not persuaded by Appellant’s contention that the “plain meaning of the phrase ‘at least 1% w/w of at least one cannabinoid compound selected from the group consisting of . . . ’ means that the concentrate must comprise at least 1% w/w of one of the individually listed cannabinoid compounds” (Appeal Br. 8 (alteration original)) and, thus, “the 1% w/w threshold may not be reached by adding up the weight percentages of the cannabinoids as the Office suggests” (Reply Br. 2).

Because the evidence of record supports a finding that cannabis strains and/or parts thereof comprise the elected cannabinoids and terpenoids

and that those of ordinary skill in this art recognize the utility of these substances, we find no error in Examiner’s conclusion that those of ordinary skill in this art would select cannabis strains and/or parts thereof that comprise these substances (*see* FF 5–7). Therefore, for all of the foregoing reasons, we are not persuaded by Appellant’s contention that “Examiner provides no evidence that other strains or parts of the plant comprise the specified cannabinoids in an amount of at least 1% w/w” (App. Br. 9).

CONCLUSION

The preponderance of evidence relied upon by Examiner supports a conclusion of obviousness. The rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over the combination of Freeman, Cannabinoids in Cannabis, and Casano is affirmed. Claims 2–6 are not separately argued and fall with claim 1.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–6	102(b)	Freeman, Cannabinoids in Cannabis, Casano	1–6	
1–6	103	Freeman, Cannabinoids in Cannabis, Casano	1–6	
Overall Outcome			1–6	

TIME PERIOD FOR RESPONSE

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

AFFIRMED