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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte HALLIE N. RICH and MICHELLE G. CANNON

_____

Appeal 2018-002853
Application 15/001,302[1]
Technology Center 1600

_____

Before RICHARD M. LEBOVITZ, JEFFREY N. FREDMAN, and RACHEL H. TOWNSEND, *Administrative Patent Judges*.

TOWNSEND, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a composition comprising a powder and a method involving that powder, which have been rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

"[M]any dietary supplements have a flavor and/or mouthfeel, which make them unpalatable. Additionally, some dietary supplements leave an

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[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 Rich Vitamins LLC. (Appeal Br. 1.)

unpleasant aftertaste in the mouth." (Spec. ¶ 3.) Appellant's invention is directed at "a rapidly dissolving orally administrable palatable powder." (*Id.* ¶ 6.)

Claims 1–16 are on appeal. Claim 1 is representative and reads as follows:

> 1. A composition comprising a powder including:
>
> at least one bulking agent;
>
> at least one soluble fiber selected from the group consisting of resistant maltodextrin, oligosaccharides, inulin, gums, polydextrose, and combinations thereof;
>
> at least one sweetening ingredient; and
>
> at least one active ingredient selected from the group consisting of Vitamin A, Vitamin C, Vitamin D, Vitamin E, Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Selenium, Zinc, Boron, omega-3 fatty acids, coenzyme Q10, calcium, probiotics, and combinations thereof,
>
> wherein the powder dissolves in the mouth upon contact with saliva.

(Appeal Br. 13.)

The prior art relied upon by the Examiner is:

Name	Reference	Date
Cherukuri	US 5895664	Apr. 20, 1999
Gendrot	US 2005/0019391 A1	Jan. 27, 2005
Kabaradjian	WO 2009/112156 A1	Sept. 17, 2009
Nayak	US 2006/0028260 A1	Dec. 21, 2006

The following grounds of rejection by the Examiner are before us on review:

Claims 1–10 under 35 U.S.C. § 103(a) as unpatentable over Cherukuri, Gendrot, Kabaradjian, and Nayak.

Claims 11 and 12 under 35 U.S.C. § 103(a) as unpatentable over Gendrot, Kabaradjian, and Nayak.

Claims 13–16 under 35 U.S.C. § 103(a) as unpatentable over Kabaradjian, Cherukuri, Gendrot, and Nayak.

DISCUSSION

The Examiner explains that claim 1 is directed to a composition that comprises a powder that includes the claimed components. (Ans. 2.) The Examiner finds that Cherukuri teaches a flowable comestible powder that can form a compacted tablet. (Final 15; Ans. 3.)

The Examiner explains that the powder in Cherukuri includes an active agent that can be a multi-vitamin mixture, as well as polyol carriers, and sweeteners. (Final 4.) The Examiner finds that Cherukuri teaches that when the powder is compacted into a tablet, the tablet composed of the powder dissolves in the mouth on contact with saliva within seconds, but does not specify the number of seconds required for dissolution. (*Id.* at 4–5.) The Examiner notes further that prior to compacting, the powder must necessarily be comestible because there are no steps taken to change the nature of the powder composition prior to compacting it. (Ans. 3.)

The Examiner finds that Gendrot teaches an orodispersible composition similar to the type of orodispersible composition in Cherukuri, where the composition is in the form of particles until compressed to make a

tablet, and that the disintegration time for the composition is noted to be approximately 10 seconds. (Final 5.)

The Examiner notes that neither reference explicitly teaches using the powder as the dosage form. (*Id.* at 6.) However, the Examiner finds that such a dosage form for oral dosage fast disintegrating compositions is well known in the art, citing Kabaradjian. (Ans. 3; Final 6.) The Examiner concludes that it would have been obvious to one of ordinary skill in the art to use the composition of Cherukuri in the form of a powder so that children and the elderly would be able to easily swallow the dosage form. (Final Action 6.)

The Examiner recognizes that none of the foregoing references teaches the soluble fiber required by the claim. (*Id.*) However, the Examiner explains that Nayak teaches a quick dissolving soluble fiber composition in the form of a powder which can be added to foods or beverages and that the composition does not alter the taste or texture of the food or beverage to which it was added. (Final 7; Ans. 7, 8.) The Examiner notes that Nayak discloses these non-digestible soluble fibers promote a number of health benefits including reducing blood glucose and insulin levels, reducing levels of blood triglycerides and serum cholesterol, and retaining levels of HDL cholesterol to help to maintain good colon health. (Final 7.) The Examiner determines that it would have been obvious to one of ordinary skill in the art to have added Nayak's quick dissolving soluble fiber to the composition of Cherukuri to achieve composition that would provide the health benefits noted by Nayak and that it would have been expected that the Nayak soluble fiber composition would not cause

unwanted taste in the Cherukuri composition given that it is taught in Nayak not to affect taste when added to foods. (Final 7; Ans. 7.)

We agree with the Examiner's factual findings and conclusion that the composition recited in claim 1 would have been obvious from the relied upon references. Appellant argues the Examiner's rejection is in error because it relies on impermissible hindsight and "the Examiner has failed to articulate any logical reason why the skilled artisan reviewing Cherukuri and/or Gendrot's tablets would decide that a powder should be developed." (Appeal Br. 8–9.) Appellant contends that (1) Cherukuri is focused on the desirability of a tablet form and does not include a soluble fiber (Appeal Br. 6–7), (2) nearly 18% of the particles of Cherukuri as "depicted in the tablest at column 23 . . . [are] larger than 40 mesh," which is larger than the powders of the recited claims and "the large number of larger particles obtained by Cherukuri would have a pronounced [negative] effect on mouthfeel if a powder produced with these larger particles was ingested directly without tableting" where "one of the desired features of the recited powders is their improved mouthfeel" (Appeal Br. 6). Appellant then argues that Gendrot, like Cherukuri, is concerned with tablets not powders. (*Id.*) Appellant argues that Kabaradjian does not disclose the use of its antacid powder in the delivery of some other active ingredient. (*Id.*) Finally, Appellant argues that Nayak's powder is not directly consumed without addition to another food or beverage formulation and thus "Nayak fails to disclose or suggest a rapidly dissolving orally administrable powder." (*Id.* at 8.) We do not find Appellant's arguments persuasive.

In particular, first, we agree with the Examiner that the composition does not have to be a powder, but rather comprises a powder. It is not

disputed that Cherukuri's tableted formulation is prepared from a powder formulation. And in any event, we also agree with the Examiner that dosage formulations in the form of a powder were well-known at the time of the invention as evidenced by Kabaradjian. (Kabaradjian 7–8.) As the Examiner explained, and Appellant does not contest, both Cherukuri and Gendrot teach creating powders with various active ingredients that are then compacted to a tablet, establishing that the powders used to form the tablet are necessarily comestible given that neither reference teaches doing anything other than compacting the powders into a tablet to form the comestible tablet. (*See, e.g.*, Cherukuri 15:14–20; Gendrot ¶¶ 66–69.)

That both Cherukuri and Gendrot teach compacting their powder formulations to make tablets does not establish non-obviousness of the claimed powder. The obviousness analysis "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). As the Examiner explained, one of ordinary skill in the art would have found it obvious and within their skill to make the comestible powder the dosage unit for administration rather than the end product tablet taught by Cherukuri and Gendrot in order to provide a formulation that would be easily administered to the elderly, children, and those having dysphagia. (Ans. 3.)

That Kabaradjian does not disclose anywhere "the use of its antacid in the delivery of some other active ingredient" (Appeal Br. 7) is not persuasive that a powder formulation for delivery of compositions like that of Cherukuri or Gendrot would not have been obvious. Cherukuri teaches forming powders for antacid compositions that can then be compacted, as well as multi-vitamin compositions. (Cherukuri 19 (Example X), 22

(Example XIV).) Thus, Cherukuri teaches that the same types of delivery of comestible powder is contemplated for antacids as it is for multivitamins. Kabaradjian further teaches its powder composition includes the same types of carriers as Cherukuri (e.g. the polyols mannitol and sorbitol) as well as including disintegrants. (Kabaradjian 8.) Moreover, like Cherukuri, Kabaradjian teaches that the antacid powder once formulated can optionally be pressed into tablets. (*Id.*) Consequently, we find Kabaradjian's teaching, though specifically directed to an antacid formulation, would have been understood by one of ordinary skill in the art, in light of Cherukuri, to be applicable to a multivitamin composition.

Regarding the addition of soluble fibers to the powder composition, we agree with the Examiner that one of ordinary skill in the art would have found such an addition obvious to the composition of Cherukuri with a reasonable expectation of success. In particular, Cherukuri teaches preparation of a multi-vitamin flowable, compactible microparticulate powder. (Cherukuri column 22 (Example XIV).) Nayak teaches that soluble fibers provide numerous health benefits. (Nayak ¶ 5.) Thus, we agree with the Examiner that given the health benefits that Nayak teaches for the soluble fiber, one of ordinary skill in the art would have had a reason to include the soluble fiber powder taught by Nayak in the multi-vitamin formula of Cherukuri.

Nayak further teaches formulation of such soluble fibers in powder that is rapidly dispersible in media, such as water, and that has a good "mouth feel" and does not alter the taste of the food or beverage it is added to. (*Id.* at Abs., ¶¶ 10–12.) We conclude that one of ordinary skill in the art would have expected that addition of this powder form of the fibers to the

multi-vitamin powder of Cherukuri would likewise "not cause unwanted taste" and would still maintain its rapid dispersability. (*See* Ans. 7.)

In light of the foregoing, we disagree with Appellant that the Examiner has "failed to provide any reasoned explanation for combining these references" (Appeal Br. 9) or the assertion that the Examiner's rejection relies on impermissible hindsight (*id.* at 8).

Consequently, we affirm the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over Cherukuri, Gendrot, Kabaradjian, and Nayak.

Claims 2–10 have not been argued separately and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Claims 11 and 12

Claim 11, like claim 1 is directed to a composition comprising a powder that includes various ingredients. However, unlike claim 1, it specifies ranges that the ingredients must fall within, and also does not specify any group from which the at least one active ingredient must be selected. Rather, any active ingredient under the sun is contemplated. Because of this the Examiner did not feel it was necessary to include the teachings of Cherukuri to make out a prima facie case of obviousness. The rejection relies instead only on the teachings of Gendrot, Kabaradjian, and Nayak.

Appellant argues the rejection is in error because "Gendrot's preference for tablets" would not motivate one of ordinary skill in the art to look to Kabaradjian's antacid or Nayak's fiber supplements. (Appeal Br.

10.) We do not find Appellant's argument persuasive for the reasons discussed above.

Consequently, we affirm the Examiner's rejection of claim 11 under 35 U.S.C. § 103(a) as unpatentable over Gendrot, Kabaradjian, and Nayak.

Claim 12 has not been argued separately and therefore falls with claim 11. 37 C.F.R. § 41.37(c)(1)(iv).

Claims 13–16

Claim 13 is directed to a method of preparing a dietary supplement by dry blending a mixture of ingredients as recited in claim 1 and then introducing that powder into the mouth of a consumer, allowing the powder to dissolve. The Examiner applies the same references as was used to reject claim 1, noting in particular that Kabaradjian teaches orally administration of its composition in the form of powders or rapidly disintegrating tables among other forms. (Final 10.) The Examiner also explains that Kabaradjian teaches the method includes mixing the ingredients together with excipients to form a blend and that the composition disintegrates rapidly in the oral cavity. (*Id.*)

Appellant's argument as to why the Examiner's rejection of claim 13 is in error is the same as that argued for claim 1. (Appeal Br. 11) In particular, Appellant states:

> The skilled artisan, reviewing Cherukuri's and Gendrot's preference for tablets, would not be motivated to apply their teachings to Kabaradjian's antacid in formulating the recited powders for the administration of the recited vitamins. The skilled artisan, looking to form a powder for administration, would not look to Nayak's laxative/fiber supplements, which are dissolved instantaneously in the food/beverage to which

> they are added and are not directly consumed without addition to the food/beverage.

(*Id.*) For the reasons discussed with respect to claim 1, we do not find Appellant's argument persuasive.

Consequently, we affirm the Examiner's rejection of claim 13 under 35 U.S.C. § 103(a) as unpatentable over Kabaradjian, Cherukuri, Gendrot, and Nayak.

Claims 14–16 has not been argued separately and therefore falls with claim 13. 37 C.F.R. § 41.37(c)(1)(iv).

DECISION SUMMARY

In summary:

Claims Rejected	**35 U.S.C. §**	**Reference(s)/Basis**	**Affirmed**	**Reversed**
1–10	103(a)	Cherukuri, Gendrot, Kabaradjian, Nayak	1–10	
11, 12	103(a)	Gendrot, Kabaradjian, Nayak	11, 12	
13–16	103(a)	Kabaradjian, Cherukuri, Gendrot, Nayak	13–16	
Overall Outcome			1–16	

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