

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHNANNES MATTEUS CORNELISEN,  
CORNELIS WILLIEM VAN OOSTEN,  
and MARCEL CAROLINE SEGERS

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Appeal 2008-0542  
Application 09/850,805  
Technology Center 1700

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Decided: March 25, 2008

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Before CATHERINE Q. TIMM, LINDA M. GAUDETTE, and  
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 4-6, 8, and 10-13. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

## I. BACKGROUND

The invention relates to a pourable shortening composition. Conventionally, pourable shortening compositions are used to fry food (Specification 1: 16). One problem, however, is that during frying spattering often occurs (Specification 1:17-18). Appellants' composition contains a combination of a salt and a citric acid ester of a partial fatty acid glyceride which, they state, "shows very good secondary spattering values," i.e., spattering is at an acceptable level (Specification 2: 27-30). Claim 1 is illustrative of the subject matter on appeal:

1. A pourable shortening composition comprising 0.4 to 1.0 wt.% of a salt and 0.25 to 0.5 wt. % of a citric acid ester of a partial fatty acid glyceride, said composition showing a secondary spattering value of at least 4.0.

Appellants request review of the sole rejection maintained by the Examiner, namely, the rejection of claims 1, 4-6, 8, and 10-13 under 35 U.S.C. § 103(a) over Tack et al. (US 4,399,165 issued Aug. 16, 1983) in view of Bade (US 4,071,544 issued Jan. 31, 1978).

## II. DISCUSSION

Appellants argue the claims as a group. We select claim 1 as representative for deciding the issues on appeal.

The issue presented to us is: Does the evidence support the Examiner's conclusion that it would have been obvious to one of ordinary skill in the art to select a citric acid ester of a partial fatty acid glyceride in an amount within the claimed concentration range for use as the emulsifier of Tack, along with salt in an amount within the claimed concentration range

to form a frying oil formulated to avoid unpleasant spattering such that the composition would have a secondary spattering value of at least 4.0?

We answer that question in the affirmative.

“Section 103 forbids issuance of a patent when ‘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.’” *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). In considering the question of the obviousness of the claimed invention in view of the prior art relied upon, we are guided by the basic principle that the question under 35 U.S.C. § 103 is not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made. *See Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). After all, in an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof, *In re Sovish*, 769 F.2d 738, 742 (Fed. Cir. 1985), and “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR*, 127 S. Ct. at 1742.

Both Tack and Bade provide evidence of what was known to those of ordinary skill in the art of formulating cooking oils and fats.

Tack seeks to formulate a frying oil that avoids unpleasant spattering (Tack, abstract), and includes in that formulation suitable emulsifiers commonly used in edible oil-in-water emulsions (Tack, col. 1, ll. 41-45). Among the commonly used emulsifiers are monoglycerides, lecithin, and

citric acid esters (Tack, col. 2, ll. 41-45). The amount of emulsifier is typically 0.2 to 2 weight %, preferably 0.25 to 1.0 %. Tack incorporates salt into the frying oil as an optional additional additive (Tack, col. 2, ll. 55-59).

In Example 1, Tack describes a frying oil using a combination of monoglycerides and soy lecithin along with salt. This formulation was tested for spattering by suspending a piece of paper above a frying pan, frying a piece of lean beef on both sides, and counting the spots of oil spattered onto the paper (Tack, col. 4, ll. 17-21). In testing the frying oil of Example 1, the testers observed only 8 spatter spots (Tack, col. 4, ll. 32-34).

In Example 11, a frying oil was made according to Example 1 with the omission of the emulsifiers, i.e., the monoglycerides and soy lecithin (Tack, col. 6, ll. 42-43). During frying of the meat in the emulsionless frying oil, more than 150 spots were observed on the paper (Tack, col. 6, ll. 43-47). Adding 0.1 kg of lecithin hardly affected the spattering behavior (Tack, col. 6, ll. 47-49).

As stated above, in addition to monoglycerides and lecithin, Tack exemplifies “citric acid esters” as “emulsifiers commonly used in edible oil-in-water emulsions” (Tack, col. 2, ll. 40-41). Tack, however, does not further identify these known “citric acid esters.”

According to Bade, citric acid esters of a partial fatty acid glyceride were known for use as emulsifiers in edible fatty emulsions (Bade, col. 1, ll. 11-15; col. 3, ll. 10-22). Bade further states that the hydrophobic versions were used as anti-spray or splatter means in the manufacture of margarines or baking fats (Bade, col. 3, ll. 17-21).

The evidence supports the Examiner's conclusion that it would have been obvious to select a citric acid ester of a partial fatty acid glyceride for use as a suitable emulsifier for the composition of Tack. Bade evinces that such citric acid esters of partial fatty acid glyceride were known in the art for just that purpose as well as for the purpose reducing spatter. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007). Here, one of ordinary skill in the art would expect to both emulsify and avoid splatter (i.e., spatter) when selecting the ester of Bade for use in the composition of Tack.

Tack also suggests emulsifier concentration levels (0.2 to 2 wt. %, preferably, 0.25 to 1.0 wt. %) that encompass the claimed range (0.25 to 0.5 wt. %). Given Tack's guidance on the concentration ranges and the fact that Tack suggests both the desire for an emulsifier of citric acid ester type and the desire of avoiding spatter, we agree with the Examiner that the evidence supports the obviousness of selecting the partial fatty acid glyceride form of citric acid ester claimed in the claimed concentrations. Appellants' claimed range would have been, *prima facie*, obvious to one of ordinary skill in the art, at least in the absence of evidence that such claimed range is critical for producing an unexpected result. *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed.Cir.1990)(claimed carbon dioxide range overlapping with prior art range created a *prima facie* case of obviousness shifting the burden to the applicant to show that the claimed range was a critical range for obtaining unexpected results); *In re Malagari*, 499 F.2d 1297, 1303 (CCPA 1974)(claimed carbon range in steel-making process was rendered *prima*

facie obvious by teachings of prior art ranges touched by the claimed range); *see also In re Aller*, 220 F.2d 454, 456 (CCPA 1955) (“where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”).

With regard to the concentration of salt, the Examiner acknowledges that the concentration of salt is not mentioned in Tack, however, the Examiner determines that the concentration would be dependent upon the amount desired by the individual artisan (Ans. 4). The evidence as a whole supports the Examiner’s determination: Tack discloses including salt, and determination of the concentration to use would have been within the capabilities of those of ordinary skill in the art. *See In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996) (“This court and its predecessors have long held, however, that even though applicant’s modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art, unless the claimed ranges ‘produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art’” quoting *Aller*, 220 F.2d at 456 and citing *In re Woodruff*, 919 F.2d at 1578).

The final question is whether the evidence renders prima facie obvious the spattering level of claim 1. We determine that it does.

As a first matter, while the testing conducted by Tack is similar to that of Appellants, the reporting is different. Tack reports spatter value by directly counting the number of spatter spots on paper suspended above the frying pan during the frying of meat (Tack, col. 4, ll. 17-21). Appellants perform an analogous test, which they term primary spattering (SV1), but

instead of directly counting the spots, Appellants compare the spotted paper image to a set of standard pictures numbered 0-10. Appellants score the spattering based on the comparison; 10 being excellent (no spattering), 0 being very poor (high level of spattering). Appellants also conduct another test, termed secondary spattering (SV2), in which they pour water into the dish, obtain the spattered paper, compare to reference sheets, and score the results using the 0-10 scale.

In Appellants mode of spatter reporting, a score of 4 for SV2 is merely “passable” whereas a score of 10 is excellent. Therefore, Appellants’ claims encompass levels of spattering anywhere from no spots on the paper (excellent or score of 10) down to levels of spattering resulting in enough spots on the paper so that the amount of spattering is merely “passable.” Appellants do not disclose what level of spots meets this “passable” standard.

Tack discloses low spatter values of 8 spots for oil containing emulsifier versus 150 spots for frying oil not containing emulsifier (Compare Examples 1 and 11). The evidence supports a determination that formulating the frying oil of Tack with optimum amounts of the known citric acid ester of a partial fatty acid glyceride for the known result of avoiding spattering would result in a frying oil having a secondary spattering value of at least 4 as claimed given that: (1) a level of 4 encompasses levels of spattering anywhere from “passable” to excellent; and (2) the citric acid ester of a partial fatty acid glyceride was known to reduce spattering.

Appellants present no evidence such as unexpected results which would overcome the Examiner’s prima facie case of obviousness.

### III. CONCLUSION

The evidence supports the Examiner's conclusion that it would have been obvious to one of ordinary skill the art to select a citric acid ester of a partial fatty acid glyceride in a amount within the claimed concentration range for use as the emulsifier of Tack, along with salt in an amount within the claimed concentration range to form a frying oil formulated to avoid unpleasant spattering such that the composition would have a secondary spattering value of at least 4.0.

The Examiner has established a prima facie case of obviousness not sufficiently rebutted by Appellants.

### IV. DECISION

The decision of the Examiner is affirmed.

### V. TIME PERIOD FOR RESPONSE

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

AFFIRMED

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