

The opinion in support of the decision being entered today was not written for publication and is not precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANTHONY G. SOMMESE and DANIEL K. CHUNG

Appeal No. 1997-0722
Application 08/364,589

ON BRIEF

Before KIMLIN, JOHN D. SMITH and WARREN, **Administrative Patent Judges**.

JOHN D. SMITH, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal pursuant to 35 U.S.C. § 134 from the final rejection of claims 1, 2, 4-6, and 9-13, all of the claims remaining in this application.

The subject matter on appeal is directed to a method for clarifying food processing waste water containing suspended

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solids (e.g., poultry farm waste water enriched with fat, oil, blood and other solids) by treatment with a vinylamine polymer defined by the claim language as "including from about 1 to about 99 mole percent vinylamine and from about 1 to about 99 mole percent of at least one monomer selected from the group consisting of amidine, vinylformamide, vinyl alcohol, vinyl acetate, vinyl pyrrolidinone, and the esters, amides, nitriles and salts of acrylic acid and methacrylic acid" (appealed claim 1 emphasis added). Such treatment effects the coagulating and flocculating of the suspended solids in the waste water thereby enabling the separation of such solids therefrom. Appellants contend (brief, page 3) that the use of the claimed vinylamine polymer produces "a more effective flocculation" as compared to currently used acrylamide-based polymers.

Claim 1 is representative and is reproduced below:

1. A method for clarifying food processing waste water containing suspended solids comprising the step of treating the food processing waste with an effective amount of at least one vinylamine polymer, the polymer having a molecular weight

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of at least¹, including from about [sic, about] 1 to about 99 mole percent vinylamine and from about 1 to about [sic, about] 99 mole percent of at least one monomer selected from the group consisting of amidine, vinylformamide, vinyl alcohol, vinyl acetate, vinyl pyrrolidinone and the esters, amides, nitriles and salts of acrylic acid and methacrylic acid;

coagulating and flocculating the suspended solids; and

separating the coagulated and flocculated suspended solids from the waste water.

The references of record relied upon by the examiner are:

Nowak et al. (Nowak)	3,715,336	Feb. 6, 1973
Miller	5,174,903	Dec. 29, 1992

The appealed claims stand finally rejected under 35
U.S.C.

§ 103 over Miller combined with Nowak.

We affirm.

As evidence of obviousness of the herein claimed process, the examiner relies on the combined disclosures of Miller and Nowak. Appellants do not dispute the examiner's finding that their claimed method for clarifying food processing waste containing suspended solids is identically described by Miller

¹ Based on the amendment filed May 6, 1996 (Paper No. 9) appellants apparently intended to limit the molecular weight of the vinylamine polymer to "at least 10,000". However, the claims were not properly amended to reflect this value.

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except for the claimed requirement regarding the use of the specific vinylamine polymer for treating the food processing waste water. In this regard, Miller discloses a process for the purification of food processing waste water and the recovery of proteinaceous materials, fats and oils therefrom by treatment of the waste water with a combination of coagulants and flocculants including synthetic polymers from the polyacrylamide family. See Miller at column 1, lines 15-22 and column 4, lines 50-65. With respect to the appellants' claimed requirement regarding the use of a vinylamine polymer, the examiner found that Nowak discloses that it was known in the art of liquid purification to utilize a polyvinylamine polymer as recited in appellants' claims, as a flocculant for suspensions of organic materials. Particularly see Nowak at column 1, lines 63-67. Based on these disclosures, the examiner concluded that it would have been obvious to a person of ordinary skill in this art to modify Miller's method by adding Nowak's polyvinylamine flocculant to the food processing waste water (i.e., an aqueous organic material containing stream) in the Miller process to aid in flocculating suspended solids therein.

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Appellants have made no arguments regarding the examiner's combination of the prior art reference teachings of Miller and Nowak. What Appellants argue is that the Nowak polymers "are only remotely related to the polymers of this invention." See the brief at page 4. Thus, appellants characterize the Nowak copolymer as including a vinylamine unit, a vinyl alcohol unit and an alkyl N-vinyl carbamate. According to appellants, the addition of the carbamate functionality allegedly changes the physical characteristics of the Nowak polymer and is significantly different from the polymers of appellants' claimed invention. See the brief page 5. However, we cannot subscribe to appellants' implicit argument that the relevant claimed language defining appellants' vinylamine polymer excludes carbamate units. The claimed language simply defines appellants' vinylamine polymer as "including" from about 1 to about 99 mole percent vinylamine and from about 1 to about 99 mole percent of, **inter alia**, a vinyl alcohol. Thus the relevant claim language does not exclude the carbamate unit of the prior art Nowak copolymer. Moreover, in any event, we note that Nowak also

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discloses binary copolymers having from about 20 to about 85 mole percent vinyl alcohol units and from about 15 to about 80 mole percent vinylamine units as useful flocculants. See Nowak at column 2, lines 3-7.

In light of the combined teachings of the applied references, it is apparent that a strong **prima facie** case of obviousness has been made out for the subject matter defined by the appealed claims. Although appellants have argued that the instant vinylamine polymers produce a more effective flocculation and provide advantages over the currently used acrylamide-based polymers of the prior art, appellants have pointed to no objective evidence in the record to support an argument that the herein claimed process produces "unexpected results".

Accordingly, we find ourselves in agreement with the examiner's ultimate legal conclusion that the herein claimed subject matter would have been obvious within the meaning of 35 U.S.C. § 103.

The decision of the examiner is affirmed.

No time period for taking any subsequent action in

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connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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JOHN D. SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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)	
CHARLES F. WARREN)	
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