THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte THOMAS G. REHBERGER and CHARLES A. HIBBERD

_____

Appeal No. 1996-2470
Application 08/192,488[1]

_____

ON BRIEF

_____

Before JOHN D. SMITH, OWENS and KRATZ, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 7-22, which are all of the claims remaining in the

[1] Application for patent filed February 7, 1994. According to appellants, the application is a continuation-in-part of Application 07/860,083, filed March 30, 1992, now abandoned.

application.

THE INVENTION

Appellants claim a ruminant feed composition containing a specified microorganism, and claim methods for preventing nitrate intoxication in a ruminant and treating a ruminant intoxicated by nitrates. Claims 7, 9 and 16 are illustrative and read as follows:

7. A composition for ingestion by a ruminant, which comprises; a carrier feed composition containing a nitrite reducing microorganism selected from the group consisting of *Propionibacterium acidipropionici* strain P_5 and a genetic equivalent.

9. A method of treating a ruminant intoxicated by nitrates, which comprises; establishing in the ruminant's rumen a population of nitrite reducing microorganisms which are capable of anaerobic denitrification in said rumen.

16. A method of preventing nitrate intoxication in a ruminant subject to such intoxication by the ingestion of a high nitrate feed, which comprises; establishing in the ruminant's rumen a population of nitrite reducing microorganisms which are capable of anaerobic denitrification in said rumen.

THE REFERENCES

Tomes	4,981,705	Jan. 1, 1991

Ayres et al. (Ayres ‘718)	5,096,718	Mar. 17, 1992
Ott et al. (Ott)	5,139,777	Aug. 18, 1992
Ayres et al. (Ayres ‘061)	5,260,061	Nov. 9, 1993

Dialog abstract no. 0690163 of A. Kemp et al. (Kemp), “Nitrate poisoning in cattle. 2. Changes in nitrate in rumen fluid and methemoglobin formation in blood after high nitrate intake”, 25 *Neth. J. Agric. Sci.* 51-62 (1977).

THE REJECTIONS

Claims 7-22 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tomes, Ott, Ayres ‘718, Ayres ‘061 and Kemp.[2]

OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejections are not well founded. Accordingly, we reverse these rejections.

Tomes discloses a method for preserving silage by

[2] The examiner’s discussion of the rejection indicates that the references are applied separately. There is no discussion of how any reference is used to remedy a deficiency in any other reference.

treating it with the microorganism *Propionibacterium jensenii* or the genetic equivalents thereof (col. 3, lines 2-13). Tomes states that only certain species of Propionibacteria function effectively in the process (col. 3, lines 49-51).

The examiner states that "[t]he capability of denitrification is deemed to be obvious to the Propionibacterium of Tomes" (answer, page 4). The examiner, however, has provided no evidence that feeding Tomes' treated silage to a ruminant would prevent nitrate intoxication, or that appellants' *Propionibacterium acidipropionici* strain P_5 is a genetic equivalent of Tomes' *Propionibacterium jensenii*. Also, the examiner has not explained why Tomes would have fairly suggested, to one of ordinary skill in the art, 1) using appellants' *Propionibacterium acidipropionici* strain P_5 in his method, or 2) feeding silage treated by use of his method to a ruminant intoxicated by nitrates.

The examiner argues that appellants admit on page 7, lines 21-22 of the brief that Tomes' microorganisms are the genetic equivalent of appellants' *Propionibacterium acidipropionici* strain P_5 (answer, page 6). As pointed out by

appellants (reply brief, page 2), appellants refer on page 7 of the brief to the definition of genetic equivalent in Tomes, but do not state that the microorganisms disclosed therein are genetic equivalents of *Propionibacterium acidipropionici* strain P_5.

Ott discloses a composition for improving the efficiency of ruminant feed utilization (col. 1, lines 9-11). The active ingredient of the composition is one or more microbial cultures which are capable of adjusting the weight ratio of acetic acid to propionic acid to an optimum value of 1.5-4.0:1 and of growing in the rumen and surviving there for at least 60 days (col. 2, lines 33-38). The cultured microorganisms can be of the Propionibacterium genus (col. 4, lines 59-63; col. 6, lines 61-68).

The examiner states that “the capability of

denitrification is deemed to be obvious to the Propionibacterium" (answer, page 4). The examiner, however, provides no evidence that Ott's feed composition prevents nitrate intoxication in a ruminant, and does not explain why Ott would have fairly suggested, to one of ordinary skill in the art, feeding the disclosed composition to a ruminant intoxicated by nitrates. Moreover, Ayres '718 (col. 1, lines 43-46 and col. 2, lines 2-4) teaches that *Propionibacterium acidipropionici* produced 0.96% propionic acid and 0.20% acetic acid, i.e., nearly five times as much propionic acid as acetic acid. The examiner has not explained why one of ordinary skill in the art would have been motivated to use this specie in the Ott composition wherein more acetic acid than propionic acid, i.e., an acetic acid to propionic acid ratio of 1.5-4.0:1, is desired.

Ayres '718 discloses a method for preserving food and feed by use of a Propionibacteria antimicrobial additive (col. 5, lines 23-66), and Ayres '061 discloses a method for inhibiting yeast spoilage in food products by use of an antiyeast food additive obtained by growing Propionibacteria

(col. 1, lines 13-14; col. 4, lines 47-63).

The examiner argues that "the capability of denitrification is deemed to be obvious to the Propionibacterium" (answer, page 4). The examiner, however, provides no supporting evidence, and does not point out where the Ayres references teach or would have fairly suggested, to one of ordinary skill in the art, that the *Propionibacterium acidipropionici* specie is useful in the disclosed methods. Also, the examiner does not explain why the references would have fairly suggested, to one of ordinary skill in the art, adding the microorganisms to ruminant feed, particularly feed for ruminants intoxicated by nitrates.

The examiner points out (answer, page 4) that Kemp discloses nitrate poisoning of cattle fed high nitrate diets. The examiner, however, does not explain why this reference discloses or would have fairly suggested appellants' claimed composition or method to one of ordinary skill in the art.

The examiner argues that selecting appellants' strain and concentration is no more than a matter of choice and is well within the skill of the art (answer, page 4). For a *prima*

facie case of obviousness to be established, however, the examiner must explain why the teachings from the prior art itself appear to have suggested the claimed subject matter to one of ordinary skill in the art. *See In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case of obviousness. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The examiner must explain why the prior art would have suggested to one of ordinary skill in the art the desirability of the modification. *See Fritch*, 972 F.2d at 1266, 23 USPQ2d at 1783-84. Such an explanation has not been provided by the examiner. Consequently, we do not sustain the examiner's rejection.

DECISION

The rejection of claims 7-22 under 35 U.S.C. § 103 over Tomes, Ott, Ayres ‘718, Ayres ‘061 and Kemp is reversed.

REVERSED

JOHN D. SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
TERRY J. OWENS	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
PETER F. KRATZ	)	
Administrative Patent Judge	)	

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