

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JUERGEN CHRISTNER, GUENTER PARTHEIL,
HERMANN PLAINER and ROLAND REINER

Appeal No. 1998-1720
Application No. 08/384,239

ON BRIEF

Before WINTERS, WILLIAM F. SMITH and SCHEINER, Administrative Patent Judges.

SCHEINER, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 2 and 5 through 11, all the claims remaining in the application.

Claims 9, 10 and 11 are representative and read as follows:

9. A powdered or granulated enzyme preparation, free of surface active agents, consisting of 80 to 99.9 percent by weight of at least one salt, otherwise conventionally used as a diluent, the remainder being a protease, present in the preparation in inactive form in a tannin complex from which it is released in active form by the salt when the preparation is dissolved in water.

10. In a method of soaking hides in a soaking float in the presence of a proteolytic enzyme, the improvement wherein the enzyme is added to the soaking float as the enzyme preparation of Claim 9 to give a proteolytic activity from 10000 to 30000 Löhlein-Volhard units per liter of soaking float.

11. In a method of bating hides in bate liquor in the presence of a proteolytic enzyme, the improvement wherein the enzyme is added to the bate liquor as the enzyme preparation of claim 9 to give a proteolytic activity from 5000 to 20000 Löhlein-Volhard units per liter of bate liquor.

The references relied on by the examiner are as follows:

Green et al. (Green)	4,009,076	Feb. 22, 1977
Borello	4,087,368	May 2, 1978
Tang et al. (Tang)	4,266,031	May 5, 1981
German Patent Spec. (Thomas)	0,128,419	Feb. 7, 1902
German Patent Spec. (Grimm I)	0,975,095	Jul. 20, 1956
German Patent Spec. (Grimm II)	0,974,813	Apr. 13, 1961
German Patent Spec. (Grimm III)	0,976,107	Feb. 7, 1963
British Patent Spec. (Töpfer)	1,156,900	Jul. 2, 1969
German Patent Spec. (Geyer)	2,143,945	Mar. 8, 1973 ¹

¹ According to appellants, “[t]he German patents discussed hereinafter were brought to the Examiner’s attention by the appellants in the Information Disclosure Statement filed January 6, 1992 in a prior application 07/783,901, now abandoned,” which “Statement contains translations of the relevant content of these patents.” Brief, page 3. It
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THE REJECTIONS

I. Claims 2 and 9 stand rejected under 35 U.S.C. § 103 as unpatentable over Thomas, Geyer, Töpfer, Green, Borello and Tang.

II. Claims 5 through 8, 10 and 11 stand rejected under 35 U.S.C. § 103 as unpatentable over Thomas, Geyer, Töpfer, Green, Borello, Tang, Grimm I, Grimm II and Grimm III.

For the reasons set forth in the body of this opinion, we reverse both rejections.

BACKGROUND

According to the specification “[t]he use of proteolytic enzymes is an established part of leather manufacture” (page 6) and “[t]he present invention pertains to solid enzyme preparations, free of surface active agents, containing proteases, obtained by tannin[] precipitation . . . and to methods for the soaking [and] bating . . . of hides” (page 1). “The technique of tannin precipitation has been known . . . for the isolation of enzymes from solutions.” During the precipitation process, tannin forms an insoluble complex with the enzyme, and must be removed in order to release the active enzyme, usually “by treating the precipitate with organic solvents, e.g. with acetone or ethanol, or by the addition of

¹(...continued)
appears from the record before us that the examiner relied on the translations in the Information Disclosure Statement in rejecting the claims on appeal.

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surface active agents, or by an increase in the pH value” (page 1). The present invention is directed to a powdered or granulated preparation containing a tannin-protease complex and up to 99.9 percent by weight of a water soluble salt, whereby the active enzyme is released from the complex when the preparation is dissolved in water, without the need for organic solvents or surfactants (page 3).

DISCUSSION

Rejection I

Claims 2 and 9 on appeal are directed to a surface-active agent-free powdered or granulated enzyme preparation, consisting of a tannin-protease complex and 80 to 99.9 percent by weight of at least one salt, wherein the protease remains in inactive form until released from the complex “by the salt” when the powdered or granulated preparation is dissolved in water.

According to the examiner, Thomas, Geyer and Töpfer “all teach tannin-protease complexes . . . for several different utilities,” while Green, Borello and Tang teach the addition of diluent salts . . . to enzyme preparations . . . as extenders in hydrolytic processes.” “Consequently, it would have been obvious to one of ordinary skill in the art . . . to add a diluent salt to the enzyme preparations of [Thomas, Geyer and Töpfer] in view of the teaching that such an addition is and was old and well known in the art and beneficial for the application of hydrolases.” Examiner’s Answer, fourth page.²

² The pagination of the Examiner’s Answer is incorrect; the first, second and third
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We disagree. As set forth in In re Kotzab, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

Most if not all inventions arise from a combination of old elements. [] Thus, every element of a claimed invention may often be found in the prior art. [] However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. [] Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [citations omitted]

In other words, “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). “[T]here still must be evidence that ‘a skilled artisan, . . . with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.’” Ecolochem Inc. v. Southern California Edison, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075-76 (Fed. Cir. 2000). In our view, that evidence is lacking in the examiner’s rejection and in the art cited.

Thomas’ focus is on protecting proteases from digestive acids by complexing them with tannin; Geyer releases and activates the enzyme from the tannin-protease complex with surfactants (which are expressly excluded from the claimed composition); while Töpfer releases active enzyme with acetone. Green, Borello and Tang, on the other hand, teach

²(...continued)
pages are numbered 1-3, the fourth page is unnumbered, and the fifth, sixth and seventh pages are numbered 3-5.

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nothing more than compositions comprising uncomplexed, active enzymes with water soluble salts, wherein the salts are used simply as diluents or fillers; no other function is described for the salts.

Appellants argue that the references “would give no incentive to . . . combine them to make a preparation in which a water soluble salt is present with a water insoluble inert enzyme/tannin complex,” as “[t]he complex in such a preparation – and the preparation itself - would be expected to be inactive until the enzyme were freed from the complex by one of the . . . techniques discussed in [Geyer or Töpfer] (e.g. with surfactants or acetone).” Appellants further argue that the cited references, if anything, would lead one to “expect such a combination to produce an aqueous solution of salt water containing the insoluble and still inert complex.” Brief, pages 5 and 6. Be that as it may, we agree with appellants that, at best, “[t]he references might suggest preparations in which a salt [is] combined with an enzyme after liberation of the enzyme from a complex in which it is bound, but that is not any of the inventions claimed.” Id., page 6.

In our judgment, the only reason or suggestion to modify the teachings of the references in the manner proposed by the examiner comes from appellants’ specification. Accordingly, on this record, we find that the examiner’s burden of establishing a prima facie case of obviousness has not been met and the rejection of claims 2 and 9 as unpatentable over Thomas, Geyer, Töpfer, Green, Borello and Tang is reversed.³

³ Having determined that a prima facie case of obviousness has not been
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Rejection II

Claims 5 through 8, 10 and 11 are directed to methods of treating leather with the preparation of claim 9. In addition to the references cited in the rejection discussed above, the examiner relies on Grimm I, Grimm II and Grimm III to establish that soaking and bating hides in a proteolytic solution was known in the art at the time of the invention.

Nevertheless, the additional references do nothing to remedy the underlying deficiency in the examiner's proposed combination of Thomas, Geyer, Töpfer, Green, Borello and Tang.

Accordingly, the rejection of claims 5 through 8, 10 and 11 as unpatentable over Thomas, Geyer, Töpfer, Green, Borello, Tang, Grimm I, Grimm II and Grimm III is reversed as well.

REVERSED

Sherman D. Winters)
Administrative Patent Judge)
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) BOARD OF PATENT

³(...continued)
established, we do not find it necessary to comment on appellants' arguments at pages 6-8 of the Brief regarding unexpected results attributable to the present invention.

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