

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEOFFREY W. SMITH,
PATRICK J. MULQUEEN,
ERIC S. PATERSON,
and JOHN CUFFE

Appeal No. 94-2881
Application 07/790,729¹

ON BRIEF

Before WINTERS, WILLIAM F. SMITH and WEIFFENBACH, *Administrative Patent Judges*.

WEIFFENBACH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 2, 3, 6, 7 and 9-11, the only claims remaining in the application. We reverse.

¹ Application for patent filed November 8, 1991. According to appellants, this application is a continuation of Application 07/469,427, filed April 5, 1990, now abandoned.

The Claimed Subject Matter

The claims on appeal are directed to a water dilutable agricultural composition and process for producing the same. The composition comprises a first dispersed aqueous phase comprising latex particles (e.g. polystyrene) and a first agriculturally active component (e.g. allethrin, chlorpyrifos, malathion, or tridiphane) and a continuous aqueous phase or second dispersed phase comprising a second active component which can be a pesticide or fertilizer, the second active component being physico-chemically, chemically or biologically incompatible with the first active component. Claims 9 and 11 are illustrative of the claimed subject matter:

9. A process for producing an agricultural composition comprising at least a first active pesticidal component, and at least one other active component which is a second pesticidal component or a fertilizer, the other active component being physico-chemically, chemically or biologically incompatible with the first pesticidal component, which process comprises,

forming an emulsion comprising the first pesticidal component and a surfactant, and combining the emulsion with a latex and the second active component so as to form a composition having a continuous aqueous phase, and at least a first dispersed phase, the first dispersed phase containing particles derived from the latex,

wherein the said first pesticidal component is present in the composition substantially wholly within the said first dispersed phase, and,

wherein the said at least one other active ingredient is present in the continuous aqueous phase or in a second dispersed phase.

11. A water dilutable agricultural pesticidal composition in the form of an aqueous latex dispersion, which dispersion is comprised of a dispersed phase which is comprised of latex particles derived from said latex; a continuous aqueous phase and at least one emulsifying surfactant which is an ethoxylated alcohol, an alkoxyated alcohol, an alkoxyated alkyl phenol, an [sic] polyaryl phenol, a half ester sulposuccinate or a phosphated polyglycol ether and which is compatible with the

latrix, the latex content of said composition is from 5 to 80 volume weight, said composition further comprises

(a) a first active pesticide which is from the group of cypermethrin, amitraz, chlorpyrifos, chlorpyrifos-methyl, fonofos, fenpropimorph, prochloraz, propiconazole, bromoxynil octanoate, myclobutanil, diclofop-methyl, fluazifop-butyl, fluroxypyr-1-methyl heptyl ester, haloxyfop ethoxy-ethyl, haloxyfop ethoxy-methyl, sethoxydim, triclopyr butoxy ethyl ester, a 2-(4-(2-fluoro-4-bromophenoxy)phenoxy propionic acid ester or a resolved isomer thereof or 2, 4-((3-fluoro-5-(trifluoromethyl)-2-pyridinyl)oxy)-phenoxy propanoic acid ester or a resolved isomer thereof which pesticide is present in the composition substantially wholly contained within the first dispersed latex particle phase;

(b) at least one other active component is a second pesticidal component from the group of guazatine, (\pm)-1-aminopropyl phosphonic acid, bentazone, clopyralid, dicamba, difenzoquat, glyphosate, imazapyr, imazaquin, chlormequat, clofentezine, cyhexatin, gamma-HCH, diflubenzuron, 1-[3,5-dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl]-3-(2,6-difluorobenzoyl) urea, hexythiazox, anthraquinone, copper oxychloride, copper oxinate, thiabendazole, thiophanate methyl, thiram, bifenox, chlorotoluron, eglinazine, isoproturon, ioxynil, bromoxynil, a biologically active derivative of such active components or a mixture of two or more of such active components or a fertilizer which is physico-chemically, chemically or biologically incompatible with the first pesticidal component and which is present in the composition substantially wholly contained within the said continuous aqueous phase: and

(c) said at least one emulsifying surfactant is present in an amount of from 0.1 to 15.0 percent of the total composition.

The Prior Art

The following prior art references are relied upon by the examiner to support the rejection of the claims:

Feinberg	3,400,093	Sept. 3, 1968
Meyers et al. (Meyers)	4,818,536	Apr. 4, 1989

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Dial Index Abstracts “Agrochemical”: Chlorpyrifos-methyl; Bifenox; Prochloraz; Nuarimol; Fluroxypyr (Dial Index Abstracts).

Meyers discloses a storage stable, water emulsifiable, substantially non-aqueous liquid concentrate adapted to on-site preparation of an aqueous emulsion of an agricultural chemical. The concentrate consists essentially of a solution of (i) a hydrophobic (i.e. water insoluble) agricultural chemical having biocidal activity, (ii) 10-30 wt. % of a solid hydrophobic polymer (e.g. polystyrene), in an effective amount to achieve sustained release of the hydrophobic agricultural chemical, (iii) a water immiscible organic solvent, and (iv) 0.5 to 2.0 wt. % of an emulsifying agent in an amount effective to form a stable oil-in-water emulsion when the concentrate is mixed with water (abstract; col. 1, lines 8-15; col. 2, line 51 to col. 3, line 13). One or more of the hydrophobic agricultural chemicals can be employed in the composition, (col. 3, lines 55-68). One of the preferred chemicals is chlorpyrifos (col. 4, lines 1 and 2). While there is no disclosure in Meyers of mixing chemicals which are physico-chemically, chemically or biologically incompatible, Meyers' claims suggest that a mixture of agricultural chemicals can be utilized with the solid hydrophobic polymer. The concentrate is prepared by (i) forming a liquid solution of the agricultural biocide having dissolved therein the solid hydrophobic polymer and emulsifying agent and (ii) then mixing the liquid solution with a water immiscible organic solvent. The concentrate is mixed with water at the point of application and forms a stable emulsion for at least 30 minutes (col. 5, lines 11-20).

Feinberg teaches a process for preparing a stable latex styrene-type polymer containing a hydrophobic insecticide (e.g. allethrin or malathion) (col. 1, lines 21-26; col. 4, lines 22-69; col. 5,

lines 7-52). The process encompasses (i) dissolving 10 to 40 parts insecticide in 100 parts of one or more polymerizable styrene-type monomer to form a liquid mixture, (ii) dispersing the mixture as droplets throughout an aqueous polymerization medium, and (iii) polymerizing the monomer by emulsion polymerization (col. 2, lines 14-61; col. 5, lines 64-73). An emulsifying agent can be added to the liquid mixture containing the polymerizable monomer. While there is no disclosure in Feinberg of mixing chemicals which are physico-chemically, chemically or biologically incompatible, Feinberg's claims suggest that more than one insecticide can be dissolved in the polymerizable monomer.

The Dial Index Abstracts discloses the chemical and physical properties of five biocide compounds, namely, chlorpyrifos-methyl, bifenthrin, prochloraz, nuarimol and fluroxypyr.

The Rejection

Claims 2, 3, 6, 7 and 9-11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Meyers or Feinberg alone or in view of Dial Index Abstracts.

Opinion

We have carefully considered the respective positions advanced by appellants and the examiner. For the reasons set forth below, we will not sustain the examiner's rejection.

The examiner has rejected all of the appealed claims over Meyers or Feinberg alone. The claimed invention is directed to a process for mixing at least two incompatible agriculturally active ingredients into a single composition. According to appellants, the problem in the art is that even though it is desirable to formulate a mixture of certain active components such as pesticides,

fungicides and herbicides, the attempts to formulate such mixtures result in formulations which are unstable or have reduced efficacy because the active ingredients are physico-chemically, chemically or biologically incompatible with each other. Appellants have found a way of eliminating or reducing this incompatibility by formulating a water-dispersible composition comprising the steps of forming an emulsion of a first active component and a surfactant and combining the emulsion with a latex and a second active component which is incompatible with the first active component.

Under 35 U.S.C. § 103, the initial burden of establishing a *prima facie* case of obviousness rests on the examiner. *In re Piasecki*, 745 F.2d 1468, 1471-1472, 223 USPQ 785, 787-788 (Fed. Cir. 1984); *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1967). This burden is satisfied by showing that the prior art would have suggested the claimed invention. *In re Lalu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984). This suggestion must be found in the prior art, not in applicant's disclosure. *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). After careful review of the prior art

references cited by the examiner, we find that neither Meyers nor Feinberg teach or suggest appellants' solution to the problem of mixing two incompatible biologically active components into a single composition.

Neither reference discloses or suggests mixing two incompatible active components, one

combined with a latex in the dispersed phase and the other in the continuous aqueous phase or second dispersed phase as required by the claims on appeal. Moreover, the only active compounds disclosed by Meyers and Feinberg appear to be appellants' first active component. The examiner has not pointed to any portion of either patent which would have suggested to one skilled in the art the concept of mixing two or more incompatible agriculturally active components as set forth in the claims on appeal. On this record, we must conclude that the examiner has not made out a *prima facie* case of obviousness for rejecting the claims over Meyers or Feinberg alone.

The examiner has also rejected all of the appealed claims over Meyers or Feinberg in view of the Dial Index Abstracts. In the answer, the examiner indicated that the Dial Index Abstracts reference has a publication date of "1991." We have not been able from the documentation of record to ascertain how the examiner arrived at this date. In any event, this application is a continuation of a parent application and has an effective filing date of April 5, 1990. See footnote

1. In view of the fact that the examiner has not established a publication date for the Dial Index Abstracts reference prior to April 5, 1990, we find that the reference is not available as prior art. Accordingly, this rejection will not be sustained for reasons set forth, *supra*, for Meyers or Feinberg taken alone.

For the foregoing reasons, we find the examiner has not made out a *prima facie* case of

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