

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERALD M. McKIBBEN, JAMES W. SMITH and
WILLIAM L. McGOVERN

Appeal No. 2001-0647
Application 08/150,703

ON BRIEF

Before WILLIAM F. SMITH, ROBINSON, and MILLS, Administrative Patent Judges.

WILLIAM F. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision in an appeal under 35 U.S.C. § 134 from the final rejection of claims 32-38, 42, 46-53, 64, and 65. Claims 66-71 are also pending and have been allowed. Claims 42 and 65 are representative of the subject matter on appeal and read as follows:

42. An article of manufacture for controlling insect pests comprising a substrate having thereon (1) a coating of a composition comprising a binder, a pigment, an insect toxicant, an insect feeding stimulant, and an ingredient which is both a filler and a thickener; and (2) a bait insecticide composition comprising

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a polymer,
at least one insect pheromone,
at least one insect feeding stimulant, and
an insect toxicant.

65. An article of manufacture for controlling insect pests comprising a substrate having thereon a friable coating of a composition comprising:
a binder,
an insect attracting pigment,
an insect toxicant,
a toxicant regeneration enhancer, and
an ingredient which is both a filler and a thickener.

The prior art references relied upon by the Examiner are:

Meyer et al. (Meyer)	1,545,005	Jul. 07, 1925
Largman et al. (Largman)	3,629,459	Dec. 21, 1971
Stendel et al. (Stendel)	4,965,287	Oct. 23, 1990
Seiner et al. (Seiner)	3,655,129	Apr. 11, 1972
Scholl et al. (Scholl)	3,350,329	Oct. 31, 1967

Quisumbing et al.¹(Quisumbing) "Insect Suppression with Controlled Release Pheromone System," Chapter 8, pp. 213-235 (1982)

Shearer et al. "Citral in the Nassenoff Pheromone of The Honey Bee," J. Insect Physiol., Vol. 12, pp. 1513-1521 (1966)

Claim 42 stands rejected under 35 U.S.C. §103(a). As evidence of obviousness, the Examiner relies upon the combined teachings of Meyer and Largman. We reverse.

¹ Both the Appellants and the Examiner call this reference Kydonieus; however, we refer to it using the first named author.

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Claims 32-38, 42, 46-53, 64, and 65 stand rejected under 35 U.S.C.

§ 103(a). As evidence of obviousness, the Examiner relies upon the combined teachings of Stendel, Quisumbing, Lloyd, Shearer, Seiner and Scholl. We reverse for claims 32-38, 46-53, 64, and 65 and affirm for claim 42.

1. Claim Interpretation

A. Claims drawn to an article of manufacture with a friable coating: 32-38, 46-53, 64 and 65

Independent claim 65 is drawn to an article of manufacture comprising a substrate having thereon a friable coating of a composition comprising a binder, a pigment, an insect toxicant, a toxicant regeneration enhancer (or an insect feeding stimulant in the case of claim 64) and an ingredient which is both a filler and a thickener. It is important to note that these claims encompass only those compositions comprising the above components and are “friable.” In other words, the claims exclude those compositions comprising the above components but are not “friable.”

Dispositive of the rejection of these claims is the meaning ascribed to the term “friable.” The term is broad and encompasses varying degrees. In interpreting this term, we are mindful:

[The] PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of words in their ordinary usage as they would be understood by one of ordinary skill in art, taking into account whatever enlightenment by way of definitions or otherwise

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that may be afforded by the written description contained in the applicant's specification.
In re Morris 127 F. 3d 1048, 1054, 44 USPQ2d 1023, 1027(Fed. Cir 1997).

Here, Appellants' specification provides the following guidance as to how the word "friable" is used to define the present invention:

The compositions of the present invention include a binder,though modified to cause the coated surface to be friable enough to allow insects to bit [sic] off and ingest the material, while still maintaining the structural integrity of the coating. (specification, page 5)

Therefore, we interpret a "friable coating composition" as claimed to be one that is friable or crumbly to the extent insects can bite and ingest pieces of the coating without affecting the structural integrity of the coating.

B. Claim 42

Claim 42, which is drawn to an article of manufacture comprising a substrate having a coating comprised of a binder, pigment, an insect toxicant, an insect feeding stimulant and an ingredient which is both a filler and a thickener as well as bait insecticide composition comprising a polymer, at least one insect pheromone, at least one insect feeding stimulant and an insect toxicant, is considered apart from claims 32-38, 46-53, 64 and 65 because the coating in the claim 42 need not be friable. With respect to the "binder" and "polymer" recitations found in claim 42, we note that Appellants' specification offers the following guidance:

The compositions of the present invention include a binder, such as various synthetic and natural resins typically used in paints and coatings...(page 5, line 1).....Examples of binders useable in the

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present invention include one or more of shellac, acrylics, epoxies, alkyds, polyurethanes, linseed oil, and tung oil (page 5, lines 20-21). ...those compositions of the present invention which include a pheromone, provide a controlled release of the pheromone....controlled release may be augmented by incorporation of certain high-molecular weight polymers which regulate the rate of evaporation of the pheromone. (specification, page 7)

We recognize that the components enumerated in the claims are included in the compositions because they provide certain functions. We also recognize that certain components are able to serve more than one function in the claimed composition as can be seen from Appellants' specification and the teachings of the cited prior art. For example, Quisumbing teaches that a polymer useful to control pheromone release is an acrylic polymer. The present specification does not provide any significant guidance as to the identity of "high molecular weight polymers." Since acrylics are described in the prior art as possessing the function of the "high molecular weight polymers" of the claimed compositions and acrylics are stated in the present specification to be a binder, it is reasonable to conclude that acrylics serve to meet both the binder and high molecular weight polymer requirements of the claims on appeal.

2. The rejection of claims 32-38, 42, 46-53, 64 and 65 over the combined teachings of Stendel, Quisumbing, Lloyd, Shearer, Seiner and Scholl

A. Because of the “friable” nature of the coating of claims 32-38, 46-53, 64 and 65, these claims will be considered apart from claim 42.

Stendel describes methods for controlling parasitosis in honey bees through use of an active agent which is placed so that the bees come in contact therewith or through the social exchange of food (column 2, lines 39-50). One embodiment of providing the active agent by direct contact involves a coating composition which comprises binder (column 5, lines 32-36); toxicant in the form of pyrethroids (column 1 to column 2, line 28); and a diluent for the toxicant, for example, cottonseed oil (column 3, lines 26-33)²; and an ingredient which is both a filler and a thickener (column 5, lines 37-44). In what appears to be another embodiment, the coating is incorporated in the form of film, strip or tape (column 5, lines 51-55) and may include coloring material (column 6, lines 37-39). The Examiner recognizes that Stendel is silent with respect to the friable nature of the coating composition but states that “[the coating] is presumed to be friable since its made of similar ingredients.” (Answer, sentence bridging pages 5 and 6)

²Cottonseed oil is useful in the present invention as a toxicant regeneration enhancer as well as an insect feeding stimulant required by claims 65 and 64, respectively (specification, page 6).

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This statement represents the total of the Examiner's analysis of the prior art with respect to the limitation of the friable nature of the coating compositions. Without further guidance or insight into the Examiner's analytical process, we interpret the Examiner's position to be all claimed coating compositions comprising the specified components in the recited amounts are inherently friable to some unspecified extent.

If this is the Examiner's position, we find no evidence in Stendel or the remaining references which supports the proposition that the Stendel coatings are "friable" to the extent insects can bite and ingest pieces of the coating without affecting the structural integrity of the coating. If the Examiner's position is based upon inherency, we note that:

To establish inherency, the extrinsic evidence "must make clear that the missing descriptive material is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill." Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1749 (Fed. Cir. 1991).

In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51, (Fed. Cir. 1999).

Since the specification gives guidance as to the scope of the word "friable," it was incumbent upon the Examiner to construe the claims in light of this guidance. The Examiner has not established that all coating compositions comprising the recited components in the recited amounts are friable to the extent indicated in Appellants'

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specification. Nor has the Examiner relied upon extrinsic evidence establishing that the coating compositions taught by Stendel meet the “friable” limitation of these claims. Absent a proper accounting of the word “friable,” we hold that the Examiner has failed to establish a prima facie case of obviousness.

The rejection of claims 32-38, 46-53, 64, and 65 over the combined teachings of Stendel, Quisumbing, Lloyd, Shearer, Seiner and Scholl is reversed.

B. The rejection of claim 42 over the combined teachings of Stendel, Quisumbing, Lloyd, Shearer, Seiner, and Scholl.

As discussed above, Stendel describes methods for controlling parasitosis in honey bees through use of an active agent which is placed so that the bees come in contact therewith or through the social exchange of food (column 2, lines 39-50).

At column 5, lines 26-51, Stendel describes coating compositions comprising pyrethroid, an insect toxicant:

...suitable carriers are also coatings which have been applied to a rigid or flexible substrate. Coatings of this type may be absorbent and be treated with agents containing active compound. However, they can also be non-absorbent and contain the incorporated active compound. As a rule, these coatings are adherent polymers to which, where appropriate, inert fillers have been added. The polymers which are used for this purpose are the surface coating raw materials of the paints industry and, for example, cellulose derivatives, acrylates and methacrylates.

Examples of fillers for the production of absorbent coatings which may be mentioned are kaolin, calcium carbonate, silicates, bentonites, cellulose, cellulose derivatives, starch and sawdust. In these cases, the active compound is either already incorporated in

the material forming the coating, or the coating is subsequently impregnated or soaked or sprayed, for example with the agent described above for spraying.

Coatings which contain the incorporated active compound can also be formed by paints or surface coatings containing active compound. These contain the active compound in a concentration of 0.00001-1, preferably 0.001-10, per cent by weight, in addition to the customary coating base. Dispersion paints and surface coatings are preferably used as the coating base.

As stated in the Claim Interpretation section above, we recognize that individual components of the claimed composition are able to fulfill more than one function. For example, on this record it is reasonable to conclude that the acrylates and methylacrylates of Stendel will serve as both binders for the coating as well as high molecular weight polymers which retard evaporation of impregnated active agents. The kaolin and bentonite are filler/thickeners as well as pigments. The toxicant diluted in cottonseed oil (column 3, line 28) provides the insect toxicant and the insect feeding stimulant. The only component of the composition recited in claim 42 absent from Stendel is the pheromone.

Shearer discloses major pheromone components of the Nassanoff pheromone (citral, geraniol and nerolic acid) which are attractive to honey bees:

[h]oney bees use the Nassanoff pheromone to mark rich sources of forage, and also to mark their hive. The scent attracts companions and guides newly recruited foragers. It may also help in the navigation of established foragers or migrating swarms. (page 1520, last paragraph)

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Quisumbing teaches controlled release of insect pheromones from polymeric material with the active ingredient (pheromone) implanted in a layer (page 214, seventh full paragraph). This reference also teaches that the inner layer serves as a reservoir for the active ingredient (pheromone) and that additional active ingredients (such as insecticides) may also be included in the this layer. Quisumbing then discusses the nature of the reservoir (inner layer) and the controlled release of pheromones:

Essentially the laminated active agent in the dispenser migrates continually, due to an imbalance of chemical potential, from the reservoir layer through one or more outer layers to the exposed surface and it thereby becomes available for biological action. (page 217, third full paragraph)...In previous studies with an antibacterial agent, an insecticide, and a fungicide, transport or release was fastest through the flexible PVC barrier film, followed by rigid PVC, acrylic, polypropylene, nylon and polyester. Polymer backbone stiffness is an important consideration when controlling the release rate of certain pheromone components, e.g. aldehydes, which are normally volatile and unstable. (page 219, paragraph c)

We note significant overlap between the polymer backbone materials taught by Quisumbing and the binders taught by Stendel, corroborating our position that the binders taught by Stendel provide the dual function of binders and controlled-release polymers.

The question now becomes whether there is a reason, suggestion or motivation to include a pheromone in the coatings taught by Stendel. We find said

reason, suggestion or motivation in the nature of the problem to be solved.³ Stendel discloses that treatment of the honey bees can be carried out in a number of ways, including direct contact with the coating carriers (column 2, lines 39-45). One of ordinary skill in the art would have understood and recognized that inclusion of pheromones taught by Shearer and Quisumbing in the coating carriers taught by Stendel would have further attracted the honey bees, thereby increasing the contact between the honey bees and the coating carriers.

We affirm the rejection of claim 42 over the combined teachings of Stendel, Shearer, and Quisumbing.

3. The rejection of claim 42 over the combined teachings of Meyer and Largman

Claim 42 is drawn to an article of manufacture comprising a substrate having thereon (1) a coating of a composition comprising a binder, a pigment, an insect toxicant, an insect feeding stimulant and an ingredient which is both a filler and a thickener; and (2) a bait insecticide composition comprising a polymer, at least one insect pheromone, at least one insect feeding stimulant and an insect toxicant.

³ The reason, suggestion, or motivation to combine two or more prior art references may come from the references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from the nature of the problem to be solved. Pro-Mold Tool Co. v. Great Lakes Plastics Inc., 75 F. 3d 1568, 1573, 37 USPQ2d 1626,1629 (Fed. Cir 1996).

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Meyer teaches the production of elastic adhesive compositions which may serve as vehicles for substances which are poisonous to rodents, insects, etc. (column 1, lines 15-22). The elastic adhesive (sticky) compositions comprise particular ratios of resinous gums, fatty acids and caoutchouc body depending on use in cold or hot climates (column 2, lines 67-83). Meyer further contemplates applying said compositions to paper, boards, sidewalks for use as vermin-traps or vermicides (column 2, lines 95-98). The Examiner states:

Meyer teaches an article, boards, traps, (column 2, page 1, lines 95-105) to which is applied a polymer binder with feeding stimulants (stearic, palmitic acids) or toxicant regeneration enhancer (page 1, lines 30-38) with filler/thickener-gums, coloring matter (page 1, lines 89-90) and insect toxicant. There is no pheromone. The toxicant regeneration enhancer is that of the instant invention. (Final rejection, page 3)

In the Answer, the Examiner's position is that Meyer teaches a coating which:

encompasses the nature of the instant inventive coating, over the substrate, providing an attractant for insects, of polymeric binder, feeding stimulants of fatty acids, and also regenerators, filler/thickener (gums), coloring matter (pigment) and toxicants. (Answer, page 4)

These passages represent the total of the Examiner's analysis of the Meyer reference. It is not readily apparent that the components of the composition taught by Meyer correspond completely to the components of the coating composition of the claim 42.

For example, the Examiner's position is that resinous gums of Meyer correspond to the filler/thickener of the instant invention (Answer, page 4). However, Appellants' specification draws a clear distinction between those materials which are both thickeners and fillers and those which are simply fillers:

[a]lso included in compositions of the present invention is an ingredient which is both a filler and thickener, such as one or more mineral clays (e.g. attapulgite) and organic thickeners. More specifically, such organic thickeners may be selected from the group consisting of one or more of methyl cellulose and ethyl cellulose. (Specification, sentences bridging pages 6 and 7)

It is also not clear from the Examiner's analysis what component of the elastic adhesive composition taught by Meyer corresponds to the binder ingredient of the instant coating composition. The Examiner cites Meyer as teaching a "polymer binder" (final rejection, page 3, line 6) or a "polymeric binder" (Answer, page 4, line 12); but never indicates which component of Meyer's composition (listed in tabular form in column 2) he regards as being said "polymer" or "polymeric" binder. Be that as it may, we note that Appellants regard various synthetic and natural resins as binders (specification page 5, line 14).

Even if we accept the Examiner's position that the elastic adhesive compositions of Meyer are analogous to the coating compositions of the instant invention and combine that disclosure with the general knowledge that resinous gums are indeed used as thickeners, there is still no teaching in Meyer which

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establishes that resinous gums also serve as fillers in their elastic adhesive compositions.

The teachings of Largman do not remedy the above deficiencies. In addition, Largman has its own deficiencies regarding the bait insecticide composition of the instant claim. The Examiner states “Largman provides the absent (column 4, lines 51-52) pheromones, with similar insect attractants.” (Answer, page 4, lines 15-16)

In the final rejection, the Examiner summarizes the teachings of Largman :

Largman shows pheromone compositions to be coated, having egg thickeners, solvents (methanol), soybean, sugar feeding stimulants, in baits for insects (column 4, lines 15-50). (Final rejection, page 3)

Appellants' specification indicates how controlled release of the pheromone is achieved:

The controlled release may be augmented by incorporation of certain high-molecular weight polymers which regulate the rate of evaporation of the pheromone. (Specification, page 7)

Largman does not appear to teach or suggest controlled release of the pheromone component of their bait insecticide, let alone through the use of high molecular weight polymers which retard pheromone evaporation. Because the Largman reference fails to remedy the deficiencies of Meyer and further fails to teach a bait insecticide composition comprising a polymer as recited in claim 42, we hold that

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the Examiner has not established a prima facie case of obviousness. Accordingly, we reverse the rejection of claim 42 under 35 U.S.C. § 103(a) as being obvious over the combined teachings of Meyer and Largman.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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