

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 40

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte KOICHI OGURA, KINYA OGAWA, TAKEHIKO FUKUMOTO

Appeal No. 2001-2046
Application No. 08/665,046

HEARD: June 11, 2002

Before SCHEINER, MILLS and GRIMES, Administrative Patent Judges.

MILLS, 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 4 and 5 all the claims pending in this application.

Claim 4 is illustrative of the claims on appeal and reads as follows:

4. A method for controlling injurious insects in a field by disturbing the copulative communication of the insects to prevent proliferation of the insects by releasing a sex pheromone of the insect comprising substantially uniformly distributing sources of the sex pheromone having an effective component release rate of 0.01-2 g/day over the central region of the field at 1 to 50 locations/ha, and substantially uniformly distributing sources of the sex pheromone having an effective component-release rate of 0.01 to 0.05 g/day over the peripheral region of the field at 500 to 2000 locations/ha.

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The prior art references relied upon by the examiner are:

Capizzi et al (Capizzi)	4,879,837	Nov. 14, 1989
Von Kohorn et al (Von Kohorn)	4,639,393	Jan. 27, 1987
McDonough et al (McDonough)	5,236,715	Aug. 17, 1993
Ohno	4,600,146	July 15, 1986
Ninomiya et al (Ninomiya) Japan	59-190902	Oct. 1984

Hummel, H.E., "Sex Pheromone Communication Disruption in Corn Rootworm Beetles, *Diabrotica* sp.," 10th International Congress of Plant Protection 1983, Vol. 1, page 287 (1984)

Cardé, R.T., "Disruption of Sexual Communication in *Laspeyresia pomonella* (Codling Moth), *Grapholitha molesta* (Oriental Fruit Moth) and *G. prunivora* (Lesser Appleworm) with Hollow Fiber Attractant Sources," Entomologia Experimentalis Et Applicata, Vol. 22, No. 3, pp. 280-288 (1977)

"Exemptions from Tolerance Requirements Granted During 1990," Pesticide and Toxic Chemical News, Vol 19, No. 11 (1991)

Qureshi, Z.A., "Control of Pink Bollworm, *Pectinophora gossypiella* (Saunders) by Mating Disruption Technique," Pakistan J. Sci. Ind. Res., Vol. 31, No. 10, pp. 711-713 (1988)

Grounds of Rejection

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Claims 4-5 stand rejected under 35 U.S.C. § 103 over Pesticide and Toxic Chemical News, Qureshi, Ninomiya in view of Capizzi, Von Kohorn, McDonough, Ohno, Hummel and Cardé.

We reverse this rejection.

DISCUSSION

In reaching our decision in this appeal, we have given consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the noted rejection, we make reference to the examiner's Answer for the examiner's reasoning in support of the rejection, and to the appellants' Brief and Reply Brief for the appellants' arguments thereagainst. As a consequence of our review, we make the determinations which follow.

35 U.S.C. § 103

Claims 4-5 stand rejected under 35 U.S.C. § 103 over Pesticide and Toxic Chemical News, Qureshi, Ninomiya in view of Capizzi, Von Kohorn, McDonough, Ohno, Hummel and Cardé.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden

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of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). It is well-established that the conclusion that the claimed subject matter is prima facie obvious must be supported by a preponderance of evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Findings of fact and conclusions of law must be made by the examiner in accordance with the Administrative Procedure Act, 5 U.S.C. 706 (A), (E) (1994). See Zurko v. Dickinson, 527 U.S. 150, 158, 119 S.Ct. 1816, 1821, 50 USPQ2d 1930, 1934 (1999). Upon judicial review, findings of fact relied upon in making the obviousness rejection must be supported by substantial evidence within the record. See In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000).

In essence, we find Pesticide and Toxic Chemical News, Qureshi, Ohno and Ninomiya to be cumulative disclosures, teaching commercial rope or string formulations incorporating sex pheromones, which contain an insect mating disruption agent.

Capizzi is relied on by the examiner for its disclosure of pheromone release technology which hinders the mating of undesirable insects by diffusing the attracting agent through the air in such a way as to hinder the insects in localizing the members of

the opposite sex. Diffusion of pheromone is obtained by either placing the dispensers in various distinct and suitably distanced areas to be protected or distributing the pheromone containing product uniformly over the whole area. According to Capizzi, the risk of mating is reduced by increasing the number of localized dispensers or the concentration of the uniformly distributed pheromone containing product. Column 2, lines 7-13. Answer, page 5.

The examiner characterizes Von Kohorn as describing cords impregnated with various active agents such as pheromones, which can be dispensed to surround an environment that is to be treated. The examiner cites Figure 7, and Column 8, lines 50-57; column 13, lines 49-51; and columns 4-5 and 20-22, in support of this position.

McDonough is cited by the examiner for the disclosure (Answer, pages 5-6):

that in the field of controlling insects through sex hormones, it would be well within the skill of the ordinary skilled artisan to determine, upon routine experimentation, the optimum amount of the pheromone that is to be released from the controlled released dispensers (see column 4, lines 7-29; columns 12-13, Example 6). Further, McDonough et al disclose that factors such as population density will affect efficacy, and "the exact dose to use in any particular set of circumstances can readily be determined by a dose response field test" (see the paragraph bridging columns 3-4).

Finally, Hummel "is cited to show that for the mating disruption of a certain insect, total daily pheromone release of 1-10g/ha/day was used..." Cardé is cited to show that for the mating disruption of another insect the total daily release of pheromone is 0.15g/ha from 1700 locations/ha was used. Answer, page 6.

The examiner states that (Id.):

[t]he difference between the claimed invention and the cited references is that no one reference explicitly discloses the combined use of high release rate and low density of pheromone sources at the central region of the field to be treated, and low release rate at high density of pheromone sources at the peripheral region of said field.

The examiner attempts to make up this difference by suggesting that “the claims are drafted so as to be readable on rather routine and obvious placements of pheromone sources.” Id.

In response to the rejection of the examiner, appellants argue the examiner has failed to state a prima facie case of obviousness. We agree.

In our view, the examiner has failed to provide evidence of a proper reason, suggestion or motivation to combine the cited references in the manner claimed and show that the combination describes every element of the claimed method. In particular, we find the examiner to have mischaracterized the disclosure of Von Kohorn. While Figure 7 and column 8 of Von Kohorn do depict and describe surrounding individual trees with pheromone impregnated tapes or strips, in our view Von Kohorn does not describe “substantially uniformly distributing sources of the sex pheromone having an effective component-release rate of 0.01 to 0.05 g/day over the peripheral region of the field at 500 to 2000 locations/ha,” as claimed. [Emphasis added.] Von Kohorn, column 13, states that “attractant agents are characteristically volatile and will tend to evaporate into the surrounding atmosphere to give a zonal effect to the dispenser.” Von Kohorn, continues, deployment of the dispenser means “positioning

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or making accessible by means of spraying aerial application, surface distribution, manual and mechanical placement and other methods of exposure of dispensers to pests.” Column 5, lines 34-37. While also describing conventional insect pheromones and attractants and their dosages per lb/acre (columns 20-22), we do not find that Von Kohorn describes placing pheromone dispensers “over the peripheral region of a field,” as claimed.

The examiner relies on statements in the prior art as to optimization of dosages and routine and obvious placements of pheromone sources to arrive at the claimed daily release rates and pheromone placements. However, it is improper to rely on the “common knowledge and common sense” of the person of ordinary skill in art to find an invention obvious over a combination of prior art references, since the factual question of motivation to select and combine references is material to patentability, and cannot be resolved on subjective belief and unknown authority. In re Lee, 277 F3d 1338, 1342, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002).

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]

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In other words, “there 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 the present case, the examiner has failed to indicate and provide evidence of the specific understanding or principle within the knowledge of a skilled artisan, explicit or implicit, that would have motivated one with no knowledge of appellants’ invention to make the combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). In re Kotzab, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000).

On the facts and record before us, we find that the examiner has not established a prima facie case of obviousness, as the examiner has failed to provide supporting prior art evidence of “substantially uniformly distributing sources of the sex pheromone having an effective component release rate of 0.01-2 g/day over the central region of the field at 1 to 50 locations/ha, and substantially uniformly distributing sources of the sex pheromone having an effective component-release rate of 0.01 to 0.05 g/day over the peripheral region of the field at 500 to 2000 locations/ha,” as claimed.

We find it unnecessary to reach additional rebuttal argument and Declaration evidence of appellants as we find the examiner has not met the burden of setting forth a prima facie case of unpatentability based on obviousness. In re Oetiker, 977 F.2d

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1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992), In re Geiger, 815 F.2d 686, 688,
2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

CONCLUSION

The examiner's rejection of claims 4-5 under 35 U.S.C. § 103 over Pesticide and Toxic Chemical News, Qureshi, Ninomiya in view of Capizzi, Von Kohorn, McDonough, Ohno, Hummel and Cardé is reversed.

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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).

REVERSED

TONI R. SCHEINER
Administrative Patent Judge

DEMETRA J. MILLS
Administrative Patent Judge

ERIC GRIMES
Administrative Patent Judge

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