

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NAN-YAO SU

Appeal 2006-3332
Application 10/161,519
Technology Center 3600

Decided: June 12, 2007

Before WILLIAM F. PATE, III, MURRIEL E. CRAWFORD, and
JENNIFER D. BAHR, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Nan-Yao Su (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 2, 4-13, and 15-22. Claims 3 and 14 have been canceled. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

Appellant's claimed invention is directed to a delivery system and method for controlling termites. Independent claims 1 and 12 are illustrative of the claimed invention and read as follows:

1. A delivery system for controlling termites wherein said delivery system comprises a toxicant-free monitoring device, a toxicant-containing matrix, and a durable non-termite-edible delivery housing for simultaneously holding the toxicant-free monitoring device and the toxicant-containing matrix, wherein the delivery housing has a plurality of openings permitting termite access to the toxicant-free monitoring device and the toxicant-containing matrix, and the matrix of the toxicant-containing matrix comprises a cellulose-containing material.

12. A method for controlling termites wherein said method comprises positioning a durable non-termite-edible delivery housing at a location accessible to termites, placing a toxicant-free monitoring device so that said toxicant-free monitoring device is held by said delivery housing, and adding a toxicant-containing matrix within said delivery housing, wherein the delivery housing has a plurality of openings permitting termite access to the toxicant-free monitoring device and toxicant-containing matrix.

The Examiner relies upon the following as evidence of unpatentability:

Takenaka	JP 60-64076	May 7, 1985 ¹
Homma (as translated)	JP 63-56240	Apr. 10, 1992
Appellant's admissions (AAPA) (Specification 19:2, 19:11-13)		

¹ We derive our understanding of this reference from the translation of excerpts thereof in the electronic record, as this appears to be the only translation relied upon by the Examiner.

Appellant seeks review of the Examiner's rejection of claims 1, 2, 4-7, 12, 13, 16, 17, 20, and 21 under 35 U.S.C. § 102(b) as anticipated by Takenaka, and rejections under 35 U.S.C. § 103(a) of claims 15 and 22 as unpatentable over Takenaka, claims 8 and 19 as unpatentable over Takenaka in view of Homma, and claims 9-11 and 18 as unpatentable over Takenaka in view of AAPA.²

The Examiner provides reasoning in support of the rejections in the Final Rejection (mailed April 8, 2003) and Answer (mailed April 20, 2004). Appellant presents opposing arguments in the Appeal Brief (filed December 11, 2003) and Reply Brief (filed June 24, 2004).

OPINION

The first issue for our consideration is whether the Examiner erred in rejecting claims 1, 2, 4-7, 12, 13, 16, 17, 20, and 21 as anticipated by Takenaka and, more specifically, whether Takenaka's disclosure of a container 1 having a hollow portion 3 "filled with a mixture of pulp, sawdust, sugars which termites like, and a slowly-acting insecticide" (Takenaka Translation 1) satisfies the limitation in claims 1 and 12 of "a toxicant-free monitoring device." The Examiner's position is that "[p]art of the matrix [i.e., mixture] can be considered as the monitoring device and

² Although the Examiner did not expressly restate the rejection of claims 9-11 and 18 in the Answer, the Examiner's discussion of these claims on page 3 of the Answer indicates that the Examiner intended to maintain this rejection. Appellant also understands this rejection to have been maintained by the Examiner (Reply Br. 2)

another part of the matrix [i.e., mixture] having an insecticide can be considered as the toxicant containing matrix” (Final Rejection 5). The Examiner further explains that,

on page 1 of the translation, it is stated that the hollow portion of the housing is filled with a mixture of pulp, sawdust, sugars and a slowly-acting insecticide. Hence, there are three areas in the housing. The first is the mixture of pulp, sawdust and sugars. The second is the slow-acting insecticide. The third is a small area where the first two ingredients mix when one is poured over the other. This forms a matrix. The housing holds both a toxicant free monitoring device which is the pulp and sawdust and sugar, and a toxicant containing matrix. A second interpretation is that the pulp, sawdust and sugar are mixed with the toxicant to form a matrix. Part of the matrix contains only the bait, part of the matrix contains the toxicant and part contains both. That part of the matrix containing the bait is considered to be the monitoring device.

(Answer 3.)

The portion of the Takenaka Translation alluded to by the Examiner does not support the Examiner’s apparent assumption that some portion of the mixture of pulp, sawdust, sugars, and slowly-acting insecticide described by Takenaka is free of insecticide or toxicant. While Takenaka’s mixture comprises several ingredients, the Takenaka Translation gives no indication that the mixture is anything other than homogeneous, with insecticide present throughout. Accordingly, we conclude the Examiner erred in determining that Takenaka’s mixture satisfies the “toxicant-free monitoring device” limitation of claims 1 and 12. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of

inherency, each and every element of a claimed invention. *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). In light of the Examiner's error in determining that Takenaka's mixture satisfies the "toxicant-free monitoring device" limitation of claims 1 and 12, the rejection of independent claims 1 and 12, and dependent claims 2, 4-7, 13, 16, 17, 20, and 21, as anticipated by Takenaka cannot be sustained.

The next issue before us is whether the subject matter of claims 15 and 22, which depend from claim 12, is unpatentable over Takenaka. In rejecting claims 15 and 22 as unpatentable over Takenaka, the Examiner concedes that Takenaka's monitoring device is not toxicant free, but contends "it would have been obvious to employ a toxicant free monitoring device since there is no reason to employ a toxicant unless termites are present and then add a toxicant containing matrix after termites are detected" (Final Rejection 3). What is lacking in Takenaka, the only evidence relied upon by the Examiner in making this rejection, is disclosure of the use of bait alone to monitor termite activity. While Takenaka discloses periodically digging the device out of the ground and examining it to monitor whether termites are still surviving in the neighborhood of the device (Takenaka Translation 1), Takenaka lacks any teaching of conducting such monitoring with an insecticide-free device. Takenaka's method employs a device containing insecticide from the moment of its positioning

in the ground. We do not sustain the rejection of claims 15 and 22 as unpatentable over Takenaka because of the lack of evidence cited therein that the use of a device containing only bait, without toxicant or insecticide, was known at the time of Appellant's invention.

The Examiner's additional reliance on Homma solely for its showing of a cover on a bait station (Final Rejection 4) does not make up for the deficiency of Takenaka discussed above, with regard to the "toxicant-free monitoring device" limitation of claims 1 and 12. Thus, the rejection of claims 8 and 19 as unpatentable over Takenaka in view of Homma also is not sustained.

In rejecting claims 9-11 and 18, which depend, directly or indirectly, from claim 1 or claim 12, as unpatentable over Takenaka in view of AAPA, the Examiner (Final Rejection 4) relies on AAPA only as evidence that hexaflumuron is a well known toxicant (Specification 19:2, 19:11-13). This, of course, does not make up for the deficiency of Takenaka discussed above. Accordingly, this rejection also is not sustained.

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.59(b), we make the following new ground or rejection.

Claims 1, 2, 4-13, and 15-22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Takenaka in view of Homma, and Appellant's admitted prior art (Specification 2:19-26, 19:2, and 19:11-13).

Takenaka discloses a device for controlling termites, the device comprising a hard plastic container 1 having perforations 2 and a hollow interior 3 filled with a mixture of pulp, sawdust (a cellulose-containing

material), sugars, and a slowly-acting insecticide. The container is driven into the soil near a location likely to be invaded by termites. Takenaka's device may be dug out of the ground periodically and monitored for evidence of foraging to determine whether termites are still surviving in the neighborhood of the device. As long as evidence of termite activity is detected, the device is repeatedly driven into the soil at regular time intervals. Termite control is deemed to be successful after the passage of a predetermined period of time without detecting termite activity. (Takenaka Translation 1.)

As evidenced by the above findings, Takenaka meets the limitations of claims 1, 2, 4, 7, 9, 12, 13, 15, 20, 21, and 22 with the exception of a toxicant-free monitoring device. Takenaka only discloses a termite control device filled with a mixture containing slowly-acting insecticide.

Homma evidences that it was known in the art at the time of Appellant's invention to monitor termite activity using a detection means comprising a cylindrical vessel 1 open at the top by insertion opening 5, a toxicant-free detection piece 2 constructed of material termites like, such as wood or synthetic resin (Homma Translation 5), inserted into the hollow core 3 of the vessel 1, and a lid 8 placed above the detection piece 2 to cover the insertion opening 5 to prevent the vessel 1 and detection piece 2 from drying out, to prevent natural enemies of termites from entering the vessel 1, and to prevent rain water from entering the vessel (Homma Translation 5 and 7-8). Homma's detection means is buried in the ground with the lid exposed, thereby facilitating removal of the lid for periodic inspection (Homma Translation 6). As long as such inspection reveals no signs of termites or termite damage, the detection piece 2 is inserted back into the

vessel 1, the lid 8 is replaced, and the detection means is left in the ground until the next inspection (Homma Translation 7). If termites or signs of termite activity are found, routes of termite infiltration are surmised based on the location of detected termite activity and “[f]urther appropriate measures” are taken to control the termites (Homma Translation 8-9). One of ordinary skill in the art at the time of Appellant’s invention would have inferred that such “[f]urther appropriate measures” could, and probably would, include use of termiticide.

Moreover, Appellant admits that it was known in the art to place toxicant-free monitoring devices, in the form of “stakes or blocks of termite susceptible timber to lure termites” near a known termite problem to monitor for termite activity. Once termite activity is observed, termiticide, such as arsenic trioxide, is injected. (Specification 2:19-26.) Hence, Appellant admits that it was known in the art to monitor for termite activity first with a toxicant-free monitoring device and then, only after termite activity is detected, apply termiticide in the areas where termite activity is detected.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1731, 82 USPQ2d 1385, 1395 (2007).

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a

combination was obvious to try might show that it was obvious under § 103.

Id., 127 S.Ct. at 1742, 82 USPQ2d at 1397.

As our above findings with respect to Homma and Appellant's admission (Specification 2:19-26) evidence, a two-step termite detection and control process, including a monitoring step using a toxicant-free bait or monitoring device and a control step using a toxicant or termiticide, was well known in the art at the time of Appellant's invention. While Takenaka discloses a method wherein the two steps are combined, using a matrix or mixture of both the bait and the insecticide, modification of Takenaka's termite control device for use in the known two-step process, wherein the detection step is first carried out using only a toxicant-free monitoring device followed by a control step using termiticide only when termite activity is detected in the first step, involves only the combination of two known elements, a known device for monitoring and controlling termites, and a known two-step method for first monitoring for and then controlling termites. Further, such modification requires merely providing a toxicant-free monitoring device until termite activity is detected and then providing a toxicant, either in combination with or separate from the toxicant-free monitoring device, only when termite activity has been detected and thus would have been well within the technical grasp of a person of ordinary skill in the art and, in light of the well known two-step method, would yield predictable results. Additionally, a person of ordinary skill in the art would have appreciated, from the well-known two-step method, that the use of toxicant is not required in the monitoring step and can be postponed until actual termite activity is detected and then specifically targeted to locations

where termites are active. After all, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.*, 127 S.Ct. at 1742, 82 USPQ2d at 1397.

In light of the above, we conclude that it would have been obvious to modify Takenaka by providing in the container 1 a toxicant-free monitoring device, in place of the mixture of pulp, sawdust, sugars and insecticide, to monitor for termite activity and then, after termite activity is detected in such monitoring step, providing in the container a toxicant-containing matrix. As a person of ordinary skill in the art would readily appreciate, there are a finite number of ways in which the toxicant-containing matrix may be placed in the container 1, specifically, either as a separate matrix alongside the toxicant-free matrix within the container 1 or as a mixture of bait (monitoring matrix) and toxicant, with the toxicant-free monitoring device having been removed from the container 1. Accordingly, either arrangement would have been obvious to one of ordinary skill in the art. The subject matter of claims 1, 2, 4, 7, 9, 12, 13, 15, 20, 21, and 22 is therefore unpatentable over Takenaka in view of Homma, and Appellant’s admissions.

With respect to claims 5, 6, 16, and 17, a person of ordinary skill in the art would further have appreciated that the toxicant-containing matrix could take the form of either a dimensionally stable structure or a dimensionally unstable structure, such as a liquid or a mixture of particulate and liquid, the latter requiring placement in some form of casing, either one of which forms would have been obvious for use in Takenaka’s device. Accordingly, it would have been obvious to enclose the toxicant-containing matrix within a casing placed within Takenaka’s container 1. The subject

matter of claims 5, 6, 16, and 17 is thus unpatentable over the combination of Takenaka, Homma, and Appellant's admissions.

With respect to claims 8 and 19, it would have been obvious to one of ordinary skill in the art to place a lid or cover on the Takenaka container 1 to cover the insertion opening at the top thereof to prevent the toxicant-free monitoring device and/or toxicant-containing matrix from drying out, to prevent natural enemies of termites from entering the container 1, and to prevent rain water from entering the container 1 as taught by Homma (Homma Translation 5). Accordingly, the subject matter of claims 8 and 19 is also unpatentable over the combination of Takenaka, Homma, and Appellant's admissions.

Finally, as admitted by Appellant (Specification 19:2 and 19:11-13), hexaflumuron, an acyl urea, is a well known termiticide. It follows that its use as the termiticide in Takenaka's device would have been obvious to a person of ordinary skill in the art at the time of Appellant's invention. The subject matter of claims 10, 11, and 18 therefore is unpatentable over the combination of Takenaka, Homma, and Appellant's admissions.

SUMMARY

The Examiner's rejections are reversed. A new rejection of claims 1, 2, 4-13, and 15-22 is entered pursuant to 37 C.F.R. § 41.50(b).

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

Appeal 2006-3332
Application 10/161,519

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

REVERSED; 37 C.F.R. § 41.50(b)

jlb

Stephen H. Docter
McDonnell Boehnen Hulbert & Berghoff
32nd Floor
300 S. Wacker Drive
Chicago, IL 60606