

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

*Ex parte* KENJI YONEDA, MINORU TAKAHATA, and TAKAHIRO  
HAYASHI

Appeal No. 2006-3176  
Application No. 10/203,620  
Technology Center 3600

ON BRIEF<sup>1</sup>

Decided: December 28, 2006

Before CRAWFORD, LEVY, and FETTING, *Administrative Patent Judges*.

FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> The appellants requested a hearing, which was scheduled for Dec. 12, 2006. However, the appellants made no appearance and the appeal is therefore decided on brief.

This is a decision on appeal under 35 U.S.C. §134 from the examiner's final rejection of claims 1 and 3 through 14, which are all of the claims pending in this application.

We REVERSE and ENTER A NEW GROUND OF REJECTION UNDER  
37 CFR § 41.50(b).

## BACKGROUND

The appellants' invention relates to an illuminator for plant growth that illuminates a plant with pulse light from a light emitting diode or continuous light with varying intensity to accelerate photosynthetic reaction, thereby activating the plant. (Spec. 1). An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. An illumination method for plant growth, comprising steps of providing a light source composed of a semiconductor optical device; modulating light generated by the light source with a rhythm signal extracted from a musical composition produced artificially, and illuminating a plant to be illuminated with the modulated light; wherein said rhythm signal produced artificially indicates sound length, pitch or stress according to a certain musical time or rule.

## PRIOR ART

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Norifumi	JP 09-275779	Oct. 28, 1997
Ryuichi	JP 10-178899	Jul. 7, 1998
Shinji	JP 08-089084	Apr. 9, 1996

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Yasunari            JP 11-289108            Oct. 19, 1999

GARDENING: Music & Plants, Copyright 2000, FT Asia Intelligence Wire, The Statesman (India), (20 October 2000), 2 pages (Statesman)

In addition, we make the following art of record.

Rice            US 2002/0154787 A1            Oct. 24, 2002  
                  Provisional 60/269,382            Feb. 20, 2001

Ramsey Electronics, Music Light Model ML1 Construction Manual, 1994

Don Lancaster, Hardware Hacker, March 1989

#### REJECTIONS

Claims 1, 3 through 6, 8, 11, 12 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Norifumi and Statesman.

Claims 7 and 13 stand rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Ryuichi.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Shinji.

Claim 10 stands rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Yasunari.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (mailed Mar. 29, 2006) for the reasoning in support of the rejection, and to appellants' brief (filed Jan. 20, 2006) for the arguments thereagainst.

## OPINION

In reaching our decision in this appeal, we have given careful 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. As a consequence of our review, we make the determinations that follow.

*Claims 1, 3 through 6, 8, 11, 12 and 14 rejected under 35 U.S.C. § 103(a) as obvious over Norifumi and Statesman.*

We note that the appellants argue these claims as a group. Accordingly, we select claim 1 as representative of the group.

The examiner has applied Norifumi to claim 1 to show illuminating a plant with a light modulated by some signal and Statesman to show exposing a plant to music.

The appellants argue

Thus, in contrast to the present invention, neither Norifumi et al. nor Statesman teaches to illuminating a plant with a light modulated by a rhythm signal extracted from a musical composition produced artificially. It is admitted that Statesman teaches that musical compositions have an effect on plant development. However, Statesman, fails to teach, mention or suggest illuminating a plant with a light modulated by a rhythm signal, as in the present invention.

(Br. 10).

The examiner responds

The examiner maintains the position that Norifumi teaches a semiconductor optical device and modulating light generated by the light source with a rhythm signal to illuminate a plant and to effect plant growth (Norifumi abstract and paragraph [0009]). Light inherently has a frequency, in addition the light of Norifumi is pulsed/modulated. Thus the light taught by Norifumi inherently has a

rhythm and anything that has a rhythm inherently is a musical composition or is an extraction from a musical composition. If one were to tap a pencil to the rhythm of the modulated light taught by Norifumi, by definition of music, the tapping pencil is a musical score. Norifumi is merely silent on explicitly teaching the fact that the rhythm signal was extracted from a musical composition. Applicant has merely claimed that the rhythm signal is extracted from a musical composition, thus it isn't even the entire composition of music and could merely be two beats extracted. The selection of a particular rhythm, i.e. one extracted from a musical composition, would have been obvious to one of ordinary skill in the art since the modification is merely the selection of a known alternate rhythm selected to meet the needs of different plant varieties through routine tests and experimentation. All modulation signals inherently have pitch and pitch inherently is produced according to certain musical time or rule.

(Answer 4).

We note that the appellants have provided no lexicographic definition of music in the specification, but we find that Webster's II New Riverside University Dictionary (1994), defines music as "vocal or instrumental sounds with rhythm, melody and harmony." We find no teaching or suggestion in either Norifumi or Statesman to modulate light with vocal or instrumental sounds with rhythm, melody and harmony. We find the examiner's argument that any signal having rhythm is inherently music to be unpersuasive given the need for harmony in music. Therefore, we find the examiner's arguments to be unpersuasive.

Accordingly we do not sustain the examiner's rejection of claims 1, 3 through 6, 8, 11, 12 and 14 under 35 U.S.C. § 103(a) as obvious over Norifumi and Statesman.

*Claims 7 and 13 rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Ryuichi.*

We do not sustain the examiner's rejection of claims 7 and 13 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Ryuichi for the same reasons above for claim 1, whose limitations are fully incorporated in these claims.

*Claim 9 rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Shinji.*

We do not sustain the examiner's rejection of claim 9 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Shinji for the same reasons above for claim 1, whose limitations are fully incorporated in this claim.

*Claim 10 rejected under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Yasunari.*

We do not sustain the examiner's rejection of claim 10 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Shinji for the same reasons above for claim 1, whose limitations are fully incorporated in this claim.

*New Grounds of Rejection Under 37 CFR § 41.50(b)*

*Pursuant to 37 CFR § 41.50(b), we enter the following new grounds of rejection:*

Independent claims 1 and 14 are rejected under 35 U.S.C. § 103 as unpatentable as obvious over Norifumi, Statesman and Rice<sup>2</sup>.

In contrast with the lack of Norifumi describing modulation of light that illuminates plants by music, we note that Rice provided such a teaching that

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<sup>2</sup> We will refer to the Rice provisional application 60/269,382 contents in this rejection because it is the provisional application filing date that makes Rice prior art to the instant application.

"Color organs," or mechanisms which modulate colored lights to sound or music for pleasing effect, have existed in the sphere of electronic experimentation for more than 30 years. Early examples include the "Sonalite" (ref: Popular Electronics, "The 'Sonalite'" May 1968), the "Psychedelia 1" (ref: Popular Electronics, "Psychedelia 1" September 1969), and other light controllers (ref: Popular Electronics, "Christmas Tree Lights Keep Time to Music" December 1969).

Generally, these devices use discrete electronic devices to vary the intensity of one or more banks of lights based on the input of some form of input (usually sound) for pleasing effect.

(Para [0002]).

We note that this clearly teaches both modulating lights with music and exposing plants, at least Christmas trees, to those lights, which embraces the entirety of the claimed subject matter in claim 1, except for the use of LED's. We note that LED's have been a species of the genus Christmas Tree Lights as long as LED's have been economically practical, which antedates the Rice provisional application. Therefore, a person of ordinary skill in the art would have immediately envisaged LED's as a species of lights among the likely implementations of Rice's Christmas Tree Lights. Further, a person of ordinary skill in the art, upon reading Norifumi would have applied LED's as the lighting source, arranged the lights to illuminate the tree as much as practical and place the tree near other plants as well for the advantages toward plants taught by Norifumi, and upon reading Statesman, would have provided sufficient volume to the music driving the Christmas Tree Lights to have an appreciable effect on the growth of the plants so illuminated.

Accordingly, we reject the two independent claims 1 and 14 under 35 U.S.C. § 103 as obvious over Norifumi, Statesman and Rice. We leave the consideration of the applicability of these references to the remaining dependent claims to the examiner.

## REMARKS

The examiner is advised to consult the following documents

The Music Lights manual for constructing a Ramsey Electronics Model No. ML1 music lights kit with a 1994 copyright suggests Christmas tree lights modulated by music (p. 10) similar to Rice in 1994. The Hardware Hacker article on electronic lighting controls provides several citations to articles on light modulated by music going back to 1963, suggesting a notoriety of such technology.

## CONCLUSION

To summarize,

- The rejection of claims 1, 3 through 6, 8, 11, 12 and 14 under 35 U.S.C. § 103(a) as obvious over Norifumi and Statesman is not sustained.
- The rejection of claims 7 and 13 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Ryuichi is not sustained.
- The rejection of claim 9 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Shinji is not sustained.
- The rejection of claim 10 under 35 U.S.C. § 103(a) as obvious over Norifumi, Statesman and Yasunari is not sustained.
- A new ground of rejection of independent claims 1 and 14 under 35 U.S.C. § 103 as obvious over Norifumi, Statesman and Rice is entered pursuant to 37 CFR § 41.50(b).

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

37 CFR § 41.50 (b) also provides that the appellants, 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 CFR § 1.136(a). See 37 CFR § 1.136(a)(1)(iv).

REVERSED AND NEW GROUND OF REJECTION UNDER 37 CFR § 41.50(b)

MURRIEL E. CRAWFORD )  
Administrative Patent Judge )  
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 ) BOARD OF PATENT  
STUART S. LEVY ) APPEALS  
Administrative Patent Judge ) AND  
 ) INTERFERENCES  
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