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THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

This opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

MAILED

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

JAN 19 1996

~~Ex parte OBE NILSSON, pro se~~

**PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES**

Appeal No. 95-2499
Application 08/075,092

ON BRIEF

Before HARKCOM, Vice Chief Administrative Patent Judge, and THOMAS and JERRY SMITH, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 21-32, all the claims in the

¹ Application for patent filed June 11, 1993. According to the appellant, this Application is a continuation and/or continuation-in-part of many previous applications, the specifics of which are not deemed necessary for a determination of any issues in this case. Accordingly, these prior applications are not listed herein.

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application. No amendments after final rejection were filed in this application.

The invention pertains to a fluorescent lamp having an associated ballast circuit. More specifically, the invention is directed to the control of amplitude modulated high frequency signals to the lamp when the lamp is not connected in circuit as a load.

Representative claim 21 is reproduced as follows:

21. An arrangement comprising:

lamp output terminals operable to connect with lamp input terminals of a fluorescent lamp; and

an assembly of interconnected component parts; the assembly being characterized by:

(a) including a power-line-operated frequency converter providing: (i) a first high-frequency output voltage at a first pair of high-frequency output terminals; the first high-frequency output voltage having a fundamental period and a fundamental frequency; the fundamental period being substantially shorter than that of the power line voltage on an ordinary electric utility power line; the fundamental frequency being substantially higher than that of the power line voltage on an ordinary electric utility power line; and (ii) a second high-frequency output voltage at a second pair of high-frequency output terminals; the second pair of high-frequency output terminals being connected in circuit with the first pair of high-frequency output terminals;

(b) having its second high-frequency output terminals connected with the lamp output terminals;

(c) whenever the lamp input terminals are connected with the lamp output terminals, supplying a lamp current to the fluorescent lamp; and

(d) whenever the lamp input terminals are not connected with the lamp output terminals, causing the second high-frequency output voltage to exhibit periodic amplitude modulation, while

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of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the claims on appeal particularly point out the invention in a manner which complies with 35 U.S.C. § 112. We are also of the view that claim 22 does not further limit the invention of claim 21, from which it depends, as required by section 112. We are further of the view that the disclosure of Pierce anticipated, and therefore, would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 27-29; however, we reach the opposite conclusion with respect to claims 21-26 and 30-32.

We consider first the rejection of all the claims on appeal based upon the second paragraph of 35 U.S.C. § 112. The merits of this rejection are entirely a function of claim construction and whether the examiner has properly construed the limitations set forth in the claims. It is the position of the examiner that the claims do not recite elements necessary to perform some of the claimed functions, and that the claims recite futuristic language of possible acts which may or may not occur. Appellant argues that the language of the claims is perfectly clear and definite.

The general rule is that a claim must set out and circumscribe a particular area with a reasonable degree of precision

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and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971). The focus must always be on whether the artisan would reasonably understand what is covered by the claimed invention.

With respect to the examiner's position that the claim language is futuristic with acts that may never occur, we do not agree. The examiner is presumably concerned with language such as appears in clauses (c) and (d) of claim 21. These clauses set forth that under certain opposite conditions specific operations will follow. One of the two conditions in these clauses must always be met. Thus, one of the two operations recited in those two clauses will also always be carried out. The claims specify how the device reacts to either of a plurality of modes under which the device would be operating. We find such language to be clear and accurate in claiming the disclosed device.

With respect to the examiner's position that elements are not recited which are capable of carrying out the recited operations, it appears that the examiner is challenging the lack of a specific recitation of some element or "means" for carrying out each operation. For example, the examiner notes that the assembly of claim 21 includes the structure set forth in clauses (a) and (b), but the examiner indicates that there is no element or

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means set forth for carrying out the operations of clauses (c) and (d). The examiner indicates, therefore, that there is missing structure necessary to carry out the functions of the claims.

There is no dispute that the claims on appeal before us recite a combination of elements in an apparatus. While the claims do not specifically use the word "means" for each element as noted by the examiner, the claims recite either "an assembly of interconnected component parts," or "a combination of constituent parts" or a "sub-arrangement" each of which is defined by a combination of structural and functional recitations. For example, in claim 21, clauses (c) and (d) recite functions being performed by the structure in lieu of reciting the actual structure which achieves the recited functions. Claim interpretation requires that the recited functions of clauses (c) and (d) be construed in light of the disclosure which sets forth the structure for carrying out these functions. There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. All that is required is that the artisan be able to understand the boundaries of the subject matter for which protection is sought. In re Swinehart, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). Accordingly, the examiner is in error to state that because there is no specific recited element for carrying

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out the functions of clauses (c) and (d), the claims are indefinite because such elements are implicitly or inherently included in the claims as part of the "assembly" or "combination" or "sub-assembly" for performing the functional recitations which are clearly recited. Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. Seattle Box Co., v. Industrial Crating & Packing, Inc., 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984).

Therefore, the examiner's refusal to interpret the claims in light of the disclosure was an error as a matter of law. In our view, when the claims on appeal are interpreted in light of the disclosure as they must be, they carve out an area of coverage within a reasonable degree of certainty. This is sufficient to comply with the second paragraph of section 112. We do not sustain the rejection of claims 21-32 as being indefinite.

Claim 22 is also rejected under the fourth paragraph of 35 U.S.C. § 112 as failing to properly limit the subject matter of the claim from which it depends. Appellant argues that claim 21 does not characterize the "second high-frequency voltage" with respect to its amplitude; that claim 22 narrows the definition of the "second high-frequency voltage" by specifying that it is not "modulated at the frequency of the power line voltage" and that this constitutes a further limitation of the claim 21 subject

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matter. We find ourselves in agreement with the examiner on this issue.

Claim 21 recites in part in clause (d):

causing the second high-frequency output voltage to exhibit periodic amplitude modulation, ... the periodic amplitude modulation having a relatively long period; the relatively long period being longer than that of the power line voltage.

This clause states that the modulation occurs at a period different from the line voltage. A different period of modulation of a cyclic signal by definition means a different modulation frequency of the cyclic signal. Thus, claim 22 which recites that the modulation frequencies are not the same adds nothing to claim 21 which recites that the modulation periods are not the same. As such, claim 22 adds no distinguishing limitation to the device of claim 21 and is, therefore, an improper dependent claim [see 37 C.F.R. §§ 1.75(b) and (c)]. We sustain the rejection of claim 22 under the fourth paragraph of 35 U.S.C. § 112 which also requires a further limitation of the subject matter claimed.

We finally consider the rejection of claims 21-32 under 35 U.S.C. § 102(b)/103 as either anticipated by the disclosure of Pierce or unpatentable over the teachings of Pierce. A good portion of the examiner's position is predicated on the view that appellant is arguing means that do not exist in the claims. For reasons we discussed above with respect to the rejection under 35

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U.S.C. § 112, second paragraph, the examiner erred when he failed to interpret the claims in light of the supporting disclosure and, therefore, ignored certain functional recitations as unsupported by claimed apparatus. Appellant's sole argument on this issue is that Pierce does not describe nor suggest the claimed periodic amplitude modulation of the second high-frequency output voltage while the magnitude of the first high-frequency voltage remains substantially non-modulated. We find some fault with the arguments of appellant as well.

We first note that we agree with appellant that the examiner has not demonstrated that Pierce modulates one high-frequency voltage while non-modulating another high-frequency voltage. The examiner has ignored this limitation as being unsupported by a recited means. This position was incorrect for reasons we discussed above. All words in a claim must be considered in judging the patentability of that claim against the prior art. If a word has no meaning, the subject matter does not become obvious, the claim becomes indefinite. One cannot ignore words in a claim in evaluating patentability over the prior art. In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Because of this improper claim interpretation, the examiner failed to apply Pierce against the invention as claimed. With respect to the limitation argued by appellant, therefore, the examiner has failed to present a prima facie case of unpatentability. The

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examiner has the initial burden of presenting a prima facie case of unpatentability. If the examiner does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). Therefore, those claims which recite the limitation argued by appellant above have not been properly rejected based upon the teachings of Pierce.

Independent claim 21 is the only independent claim which has the limitation argued by appellant recited in the specific manner indicated above. Independent claims 24, 30 and 31 recite "causing the amplitude of the second AC output voltage to vary periodically at a relatively low frequency, even as the amplitude of the first AC voltage remains constant." We find this language to be equivalent to the language of claim 21 concerning the modulation of one voltage while non-modulating the other. Therefore, the quoted limitation of claims 24, 30 and 31 has not been addressed by the examiner to make a prima facie case of unpatentability for the same reasons noted above with respect to claim 21.

The remaining independent claim 27 does not have the language argued by appellant above nor the language of claims 24, 30 and 31 quoted above. Claim 27 only addresses what happens to one of the voltages in the system when the fluorescent lamp is operating correctly compared to when the lamp is inoperative or

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missing. Claim 27 basically recites that a voltage in the system is non-varying during normal operation but is amplitude-modulated at a low frequency when the lamp is missing or not working. The examiner has pointed out how Pierce shifts from normal non-modulated voltage to a modulated amplitude whenever an open circuit at the lamp is detected. This operation meets the recitation of independent claim 27. Appellant admits in the brief that the situation suggested in Pierce's column 4, lines 18-23 would cause an amplitude-modulated high-frequency voltage to exist across a pair of terminals in Pierce's circuit. The breadth of claim 27 requires nothing more than that this modulation take place under certain circumstances. Pierce's disclosure, therefore, fully meets the invention of claim 27 under 35 U.S.C. § 102, and accordingly, also renders the invention of claim 27 obvious within the meaning of 35 U.S.C. § 103.

In summary, the examiner has failed to make a prima facie case of unpatentability with respect to the invention as set forth in claims 21, 24, 30 and 31. The examiner has, however, made a case of anticipation and obviousness against claim 27 which appellant has not rebutted. Since appellant has not separately argued the limitations of any of the dependent claims, all the dependent claims will stand or fall with the claims from which they depend. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Thus, the rejection of claims 21-32 under 35 U.S.C.

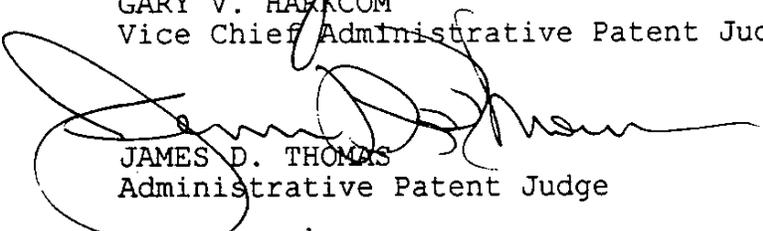
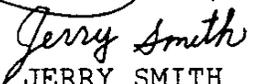
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§ 102(b)/103 is sustained as to claims 27-29 but is reversed as to claims 21-26 and 30-32.

The rejection of claims 21-32 under 35 U.S.C. § 112, second paragraph, has been reversed. The rejection of claim 22 under 35 U.S.C. § 112, fourth paragraph, has been affirmed. The rejection of claims 21-32 on prior art has been affirmed as to claims 27-29 but has been reversed as to claims 21-26 and 30-32. Accordingly, the decision of the examiner rejecting claims 21-32 is affirmed-in-part.

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

AFFIRMED-IN-PART


GARY V. HARKCOM
Vice Chief Administrative Patent Judge)
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JAMES D. THOMAS
Administrative Patent Judge)
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JERRY SMITH
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