

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte OLE K. NILSSEN

Appeal No. 96-1582
Application No. 08/292,928¹

ON BRIEF

Before THOMAS, HAIRSTON and KRASS, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed August 18, 1994. According to appellant, this application is a continuation of Application No. 07/912,261 filed July 13, 1992, now abandoned; which is a continuation-in-part of Application No. 07/901,989 filed June 22, 1992, now U.S. Patent No. 5,469,028 issued November 21, 1995.

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This is a decision on appeal from the final rejection of claims 1 through 40, all of the claims pending.

The invention is directed to circuitry for ballasting a gas discharge lamp.

Representative independent claim 16 is reproduced as follows:

16. An arrangement for ballasting a gas discharge lamp, comprising:

a power line providing a substantially sinusoidal AC power line voltage at a pair of power line conductors; the power line conductors being electrically connected with earth ground;

a rectifier arrangement connected with the power line conductors and operative: (i) to draw a line current therefrom; and (ii) to provide a first DC voltage across a first pair of DC terminals; the instantaneous absolute magnitude of the first DC voltage being substantially equal to that of the AC power line voltage; and

a circuit arrangement connected with the first pair of DC terminals and functional to provide a high-frequency ballast output voltage between a pair of ballast output terminals; the ballast output terminals being operable to connect with a gas discharge lamp; the high-frequency ballast output voltage being of magnitude sufficient to ignite such a gas discharge lamp and to supply it with a high-frequency lamp current; the circuit arrangement being characterized by including an inverter circuit supplied with DC power from a second pair of DC terminals across which exists a second DC voltage of substantially constant magnitude; at least part of the DC power supplied to the inverter circuit being derived from the ballast output terminals by way of an auxiliary DC source

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means connected in circuit with the ballast output terminals as well as with the second pair of DC terminals.

The examiner relies on the following reference:

Stupp et al. (Stupp) 4,560,908 Dec. 24,
1985

Claims 1 through 40 stand rejected under 35 U.S.C. § 103 as unpatentable over Stupp.

Reference is made to the brief and answer for the respective positions of appellant and the examiner.

OPINION

We will sustain the rejection of claims 8, 15, 34 through 36 and 38 through 40 under 35 U.S.C. § 103 but we will not sustain the rejection of claims 1 through 7, 9 through 14, 16 through 33 and 37 under 35 U.S.C. § 103.

The examiner applies Stupp against all of the pending claims. Stupp is directed, as is the instant invention, to a high-frequency ballast for discharge lamps. Also, like the instant claimed invention, Stupp discloses a power line which provides a substantially sinusoidal AC power line voltage and

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a rectifier (bridge rectifier 10 in Stupp) connected to the power line and operative to draw a line current and to provide a DC voltage across a pair of DC terminals.

As appellant argues, claim 1 requires that the line current drawn by the rectifier have a "substantially sinusoidal waveform."

Whereas the instant claimed invention requires the line current drawn by the rectifier to have a "substantially sinusoidal waveform," as shown, for example, in instant Figure 3d, Figure 2A of Stupp, which is indicative of a voltage, not current, shows a sinusoidal waveform which has been clipped to a constant voltage value V_{Min} every half cycle. The waveform of Stupp's Figure 2A is, therefore, not "substantially sinusoidal," as required by claim 1. Further, even, if by some stretch of the imagination, Figure 2A of Stupp could be considered to show a "substantially sinusoidal waveform" of the line current drawn by the rectifier, instant claim 1 defines a "substantially sinusoidal waveform" as being a "waveform having not more than 10% total harmonic distortion." The examiner has pointed to nothing in the prior art which suggests that the waveform shown in Figure 2A of Stupp has not

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more than 10% total harmonic distortion. We note that Stupp does suggest that it is desirable to have a low harmonic distortion, indicating at column 7, lines 43-53 that "above 40% for the third harmonic" would be an "unacceptable level of line current harmonic contents." However, we find no suggestion therein of the more limited and specifically claimed "not more than 10% total harmonic distortion."

Thus, we will not sustain the rejection of claims 1 through 7 under 35 U.S.C. § 103.

Turning now to independent claim 16, appellant argues that the claim requires the instantaneous absolute magnitude of the first DC voltage be "substantially equal" to that of the AC power line voltage.

The examiner relies on Figure 2A of Stupp and contends that this is a

voltage waveform of the current produced at the output terminals of rectifier 10, which magnitude, the examiner maintains, **would be** "substantially equal" to that of the AC power line voltage's in the absense [sic] of a **transformer** or other circuitry that would effect a substantial difference in voltage magnitude of the two voltages [emphasis in the original-answer-page 3].

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First, even the examiner appears to admit that the magnitude of the voltage at the output of the rectifier in Stupp is not substantially equal to that of the AC power line voltage, alleging that they "**would be**" in the absence of other circuitry. Even if the examiner's allegation is assumed to be correct, the examiner has indicated no motivation or suggestion in the prior art for making the proposed modification, viz., eliminating a transformer or other circuitry from Stupp. Accordingly, the examiner's rejection, on its face, is in error.

Moreover, Figure 2A of Stupp shows a waveform which begins as a sinusoidal waveform but then is clipped to a constant voltage every half cycle whereas the AC power line voltage has a full sinusoidal waveform. Accordingly, one cannot say that the instantaneous absolute magnitude of the DC voltage across the pair of rectifier output terminals in Stupp is "substantially equal" to that of the AC power line voltage, as claimed.

Therefore, we will not sustain the rejection of claim 16 under 35 U.S.C. § 103.

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We also will not sustain the rejection of independent claims 9, 12, 17, 18, 23 and 29, and the claims which depend therefrom, as well as dependent claim 37, because these claims include limitations discussed supra with regard to claims 1 and 16.

However, we will sustain the rejection of claims 8, 15, 34 through 36 and 38 through 40 under 35 U.S.C. § 103 since these claims include none of the limitations argued by appellant as distinguishing over the applied reference. Arguments not made by appellant are waived. In re Kroekel, 803 F.2d 705, 709, 231 USPQ 640, 642-643 (Fed. Cir. 1986).

We have not sustained the rejection of claims 1 through 7, 9 through 14, 16 through 33 and 37 but we have sustained the rejection of claims 8, 15, 34 through 36 and 38 through 40. Accordingly, the examiner's decision is affirmed-in-part.

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

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AFFIRMED-IN-PART

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
KENNETH W. HAIRSTON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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ERROL A. KRASS)	
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