

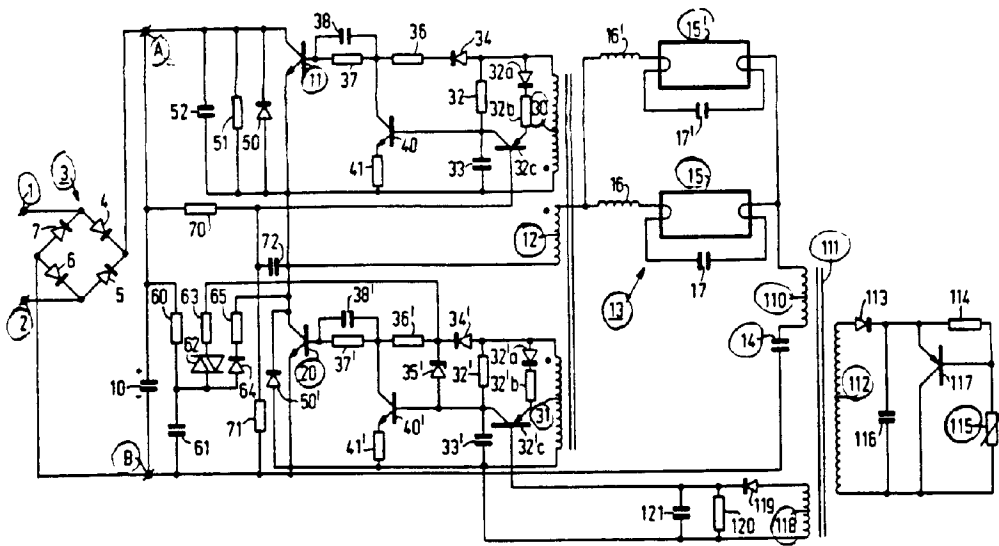
COMMISSIONER'S DECISION

Obvious: The rejected claims were replaced by a claim to the safety feature of the conductively isolated winding in the circuit, thus clearing the cited art. Rejection modified.

This decision deals with Applicant's request for review by the Commissioner of Patents of the Examiner's Final Action on application 500,113 (Class 315-44). The application was filed on January 22, 1986, by N.V. Philips Gloeilampen Fabrieken and is entitled ELECTRIC ARRANGEMENT FOR REGULATING THE LUMINOUS INTENSITY OF AT LEAST ONE DISCHARGE LAMP. The inventor is J.M. van Meurs. The Examiner in charge issued a Final Action on May 9, 1989, refusing to allow the claims of the application.

Subsequent to the response to the Final Action, the Applicant submitted a single claim by letter dated April 18, 1990.

The invention provides an electrical circuit for regulating the luminous intensity of at least one discharge lamp by means of one variable non-capacitive impedance, as shown in figure 1 reproduced below.



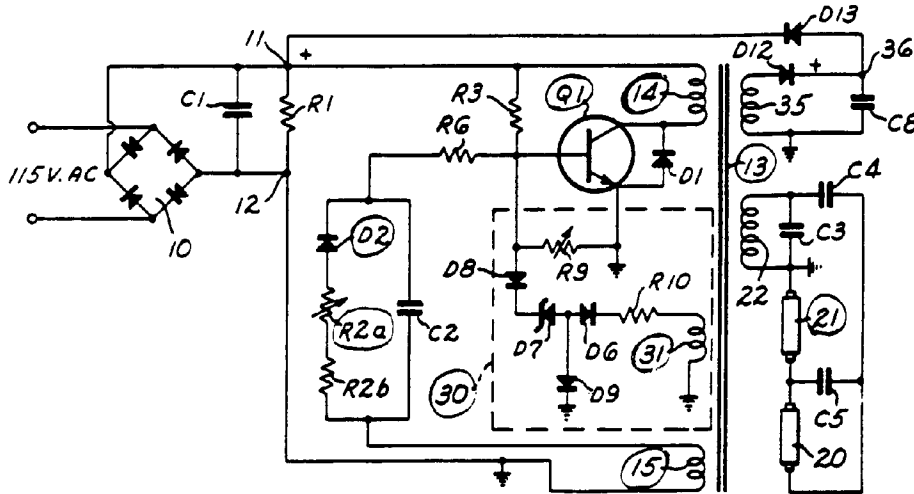
The variable impedance 115 that is used to regulate discharge lamps 15 and 15' is part of a control circuit that is electrically conductively isolated from that part of the circuit that forms part of a DC/AC converter for the high-frequency supply of the discharge lamps. The alternating voltage source 1, 2, is rectified by the bridge 3 and is lead to input terminals A and B of the converter. Among the several components interconnected between A and B are transistors 11 and 20, 11 being part of a control device having a secondary winding 30, and 20 being part of a control device having a secondary winding 31. 30 and 31 are magnetically coupled to a primary winding 12. Transistor 11 is also part of a series combination including primary winding 12, a load circuit 13, a first winding 110, and a capacitor 14. Load circuit 13 has two parallel branches each carrying one of the above discharge lamps. The current from the lamps flows through the first winding 110 which surrounds an undivided ferromagnetic core 111 that carries and magnetically couples a third winding 118. A second winding 112 is magnetically coupled by core 111 to 110 and 118, but is not electrically connected to them, thus providing protection against

electrical contact in operating the variable impedance 115 when regulating lamps 15, 15'.

In the Final Action, the Examiner cited the following United States Patent:

4,017,785 Apr. 12, 1977 Perper

Figure 1 of the Perper patent is reproduced below:



The Examiner refused the Applicant's two claims in view of Perper, saying in part, as follows:

...

The above reference shows a discharge lamp operating circuit and claim 1 may be read thereon as follows:

Claim 1

Perper

"An electric arrangement  
--at least one discharge  
lamp"

See figures 1 and 2,  
discharge lamp "21"

"---circuit having a  
first winding arranged to  
surround a core of  
magnetizable material"

The circuit of Perper has  
a first winding "14" on  
core "13".

"this winding--supply of  
the discharge lamp"

The winding "14" is the  
primary winding for the  
transformer energizing  
lamp "21".

"and this core--a second winding coupled magnetically to the first winding"

A second winding "15" on the core "13" is coupled to "14".

"characterized---lamp"

The winding "14" is the output winding in the collector circuit of the inverter oscillator transistor Q1.

"the core---having a third winding---converter"

A third winding "31" coupled to winding "15" through core "13" is connected to a control device "30" forming part of the converter.

"the third winding being magnetically coupled to the first winding"

the winding "14" is magnetically coupled to winding "31" through the core "13".

"and a series combination of a non-capacitive variable impedance and a diode being connected between the ends of the second winding"

the series combination of a variable resistor R2a and diode D2 are connected in series between the ends of coil or winding "15" as shown in figure 1.

The capacitor defined in claim 2 as connected in parallel to the above series-combination is shown as C2 in figure 1 of the reference.

Applicant's remarks in the above letter relating to the manual adjustment of the third winding voltage by the variable resistor have been considered. It is noted that this feature is not defined by the claims and therefore cannot be considered as distinguishing over the reference.

. . .

The Applicant responded to the Final Action with an amendment to claim 1, and said in part, as follows:

... It was believed that the recitation of a "variable impedance" implied that the impedance is manually adjustable but it is conceded that claim 1 could have been more explicit in that regard. As amended, claim 1 now recites explicitly that the impedance is manually variable and that manual adjustment of the variable impedance determines the voltage developed across the third winding.

. . .

By the letter dated April 18, 1990, subsequent to a telephone discussion, the Applicant submitted one amended claim to replace the two rejected claims, and argued in part, as follows:

... This is further to a recent telephone discussion between Mr. Brown of the Patent Appeal Board and the undersigned. Mr. Brown intimated that the Examiner would look favourably on a revision of the claim to specify that the second winding is coupled magnetically but not electrically to the first winding. Applicant agrees with this suggestion and has amended the claim to include the words "the second winding being electrically conductively isolated from the first and third windings,".

The statement of invention on page 2 of the disclosure has been conformed to the revised claim and the first two full paragraphs of page 3 have been revised and combined into a single paragraph also consistent with claim 1.

. . .

The issue before the Board is whether or not the single amended claim removes the rejection based on obviousness. The amended claim of April 18, 1990 reads:

An electric arrangement for regulating the luminous intensity of at least one discharge lamp, this arrangement comprising an electric circuit having a first winding arranged to surround a core of magnetizable material, this winding being included in an electric circuit for the supply of the discharge lamp and this core further having a second winding coupled magnetically to the first winding, characterized in that the first winding is included in a circuit forming part of a DC/AC converter for the high-frequency supply of the discharge lamp, the core of magnetizable material having a third winding which is magnetically coupled to the second winding and is connected to a control device forming part of the DC/AC converter, the third winding being magnetically coupled to the first winding, the second winding being electrically conductively isolated from the first and third windings, and a series-combination of a non-capacitive manually variable impedance and a diode being connected between the ends of the second winding, a capacitor being connected parallel to the variable impedance.

From a comparison of the amended claim to the rejected claims, the Board believes the safety feature disclosed has been clearly identified. By setting out that the second winding is electrically conductively isolated from the first and third

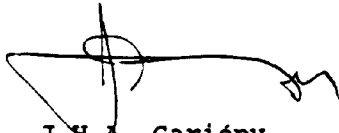
windings, and that the non-capacitive manually variable impedance and the diode are in series with the second winding, the single amended claim presents an improvement in protection against the risk of manual contact with the power supply portion of the known DC/AC converter. The Board is satisfied that the single amended claim overcomes the obviousness rejection.

The Board recommends, therefore, that the claim submitted April 18, 1990 be accepted as overcoming the refusal of the claims for being obvious.



M.G. Brown  
Acting Chairman  
Patent Appeal Board

I concur with the findings and the recommendation of the Patent Appeal Board. Accordingly, I remand the application to the Examiner for prosecution consistent with the findings of the Board.



J.N.A. Gariépy  
Commissioner of Patents

dated at Hull, Quebec  
this 9 day of August , 1990

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