

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(2) is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANCIS M. BARLAGE

Appeal No. 1997-0288
Application 08/200,123¹

ON BRIEF

Before HAIRSTON, MARTIN, and GROSS, Administrative Patent
Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1
through 9.

¹ Application for patent filed February 22, 1994.

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The disclosed invention relates to a load driver that produces a variable output voltage at a substantially constant current.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A load driver adapted to produce a variable voltage output at substantially constant current, comprising in combination:

a transformer including primary and secondary windings, the secondary winding including first and second ends;

an output branch to be connected to a reactive and inductive load, and connected to the secondary winding; the output branch including a resistor aside from the load;

a transistor connected to the primary winding so as to be operable to modulate current flow therethrough, the transistor including a control input;

a pulse-width modulator connected to the resistor so as to be operable to sense current flow therethrough, and connected to the control input of the transistor so as to be operable to modulate current flow therethrough in response to the current flow through the resistor, to produce a substantially constant current, variable voltage output.

The reference relied on by the examiner is:

Saito et al. (Saito)	5,297,014	Mar. 22,
1994		
		(filed Jan. 3, 1992)

Claims 1 through 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Saito.

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

OPINION

The obviousness rejection of claims 1 through 9 is reversed.

According to the examiner (Answer, pages 3 and 4):

Saito et al discloses the invention essentially as claimed including a transformer (T1), diode (Q3), resistor (R6), a transistor (Q1), a pulse-width modulator (3) and a voltage dividers [sic] (R2-R4) as claimed except for the [sic] obtaining the output of a substantially constant current, variable voltage output. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to obtain the output of a substantially constant current, variable voltage output which is merely a designer's choice, since all of the essential elements for a constant current, variable voltage device of the present invention are present in the cited reference.

In response to the rejection, appellant argues (Brief, page 4) that "[i]n no manner can a circuit breaker, or even the ten circuit breakers of Saito, suggest a continuously operational control arrangement that finely controls output current to a constant level" because "Saito's arrangement operates only to modify or lower the maximum current threshold, rather than creating a constant current output."

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In short, appellant argues (Brief, page 5) that "[i]t cannot be mere . . . 'design choice'

to change a constant voltage, variable current output power system (Saito) into the opposite."

We agree with all of appellant's arguments. Saito discloses a current detection circuit 7 (Figure 1) that receives an output current that flows through current detection resistor R6. The output from the current detection circuit 7 is supplied via photocoupler Q5 to primary current detection means A. According to Saito (column 6, lines 17 through 26):

If, therefore, there is no input from the secondary current detection means B, the threshold value for current detection is set at a level at which a peak current can be supplied, as shown in FIG. 2A. In contrast to this, if an input from the secondary current detection means B is received, the detection level of the primary current detection means A is shifted downward to limit a current, as shown in FIG. 2B. In this embodiment, the transistor portion of the photocoupler Q5 serves as a variable resistance element.

Although Saito's circuit appears to be similar to the circuit disclosed by appellant, Saito's circuit is designed and operated "to maintain the output voltage at a constant value" (column 11, lines 17 and 18), which is the very antithesis of the claimed invention. Accordingly, we agree with appellant (Brief, page 5) that "[i]n Fig. 2B of Saito, it

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is clear that output current varies as the load changes, being limited only when reaching its peak value." In summary, we agree with appellant (Reply Brief, page 2) that the examiner has resorted to the use of impermissible hindsight to demonstrate the obviousness of the claimed invention.

DECISION

The decision of the examiner rejecting claims 1 through 9 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
JOHN C. MARTIN)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
)	
ANITA PELLMAN GROSS)	
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