

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(2) is not binding precedent of the Board.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 WILLIAM L. HAYDEN

MAILED

Appeal No. 95-4845
Application 07/903,402¹

NOV 27 1996

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

ON BRIEF

Before HAIRSTON, KRASS, and JERRY SMITH, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 2, 5, 9 through 12, 14, and 15. Claims 3, 4, 6 through 8, and 13 were objected to as being dependent upon a rejected base claim,

¹ Application for patent filed June 24, 1992.

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but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In an Advisory Action (paper number 11), the examiner found claims 11 through 15 to be allowable. Accordingly, claims 1, 2, 5, 9, and 10 are the only claims on appeal to the Board.

The disclosed invention relates to a control circuit for a two speed direct current (DC) motor that prevents stalling of the motor while operating in a high speed mode by switching between a high speed input and a low speed input dependent upon motor operating conditions.

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

1. A control circuit for operating a two speed direct current (DC) motor comprising:

switch means for selecting among a zero speed or motor off, a low speed and a high speed for operation of said two speed DC motor, said switch means connecting power to a first terminal for selection of said low speed and a second terminal for selection of said high speed; and

control means connected between said first and second terminals and low speed and high speed inputs for said motor for preventing stalling of said motor in said high speed by switching between said high speed input and said low speed input dependent upon motor operating conditions when said high speed is selected by said switch means.

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The references relied on by the examiner are:

Alessio	4,306,264	Dec. 15, 1981
Gille et al. (Gille)	4,314,186	Feb. 2, 1982

Claims 1, 2, 5, 9, and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gille in view of Alessio.

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

OPINION

We have carefully considered the entire record before us, and we will reverse the 35 U.S.C. § 103 rejection of claims 1, 2, 5, 9, and 10.

Turning to the applied references, we agree with the examiner that:

Gille et al. teach a two speed motor 10 with one winding 12 designated as a high speed winding and another winding 11 designated as a low speed winding. The motor can be run at three levels, off, low, and high. Stalling is prevented by detecting an operating condition of the motor. When stalling is determined the motor is deenergized.² Gille et al. fail to teach

² A windshield wiper motor circuit "which de-energizes a motor when overloaded or stalled" is discussed on page 2 of appellant's specification.

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that the motor is merely slowed down rather than being fully deenergized. Alessio teaches a multi-speed motor with stall protection. When over current is detected a thermal switch 15 opens and immediately reduces the current permitted to flow to the motor. This reduction is not to zero, but rather to a reduced level (final rejection, pages 2 and 3).

With these teachings in mind, the examiner is of the opinion that:

It would have been obvious to one of ordinary skill in the art to have combined the speed reducing running speed control of Alessio within the teaching of Gille et al. to prevent stalling. One of ordinary skill in the art would have known that when running a motor at high speed and overload is detected to reduce the power to a lower level. When only one lower level is available it is easily recognizable that the switching of control to this lower level is desirable. The examiner takes official notice that a bistable bimetallic [sic, bimetallic] switch is a specific type of thermal switch. One of ordinary skill in the art would have known to use a bimetallic switch as a thermal sensor to quickly react to overcurrent conditions (final rejection, page 3).

Appellant argues that:

If the teachings of Alessio were applied to Gille et al, the power provided to the motor of Gille et al would be reduced substantially. Since the windshield wiper system of Gille et al cannot be unloaded as can a power tool, such a reduction in the power provided to the wiper motor would cause the motor immediately to stall rather than preventing the motor from stalling as asserted by the Examiner.

In this regard, it is noted that there is no change in the motor of Alessio to change the operating speed. Rather, the power provided to the motor is reduced for operation of the motor at a reduced level.

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Accordingly, the teachings of Alessio are not to switch operating speeds as asserted by the Examiner but to provide reduced power to the motor to serve as a warning that the motor has been "temporarily disabled" (see Alessio column 1, line 49).

This operation, i.e., reducing power to the motor, is completely different than the teachings of the present application. To interpret Alessio as teaching a switch between different operating speeds of a multiple speed motor is respectfully submitted as improperly applying the teachings of the present application with hindsight (Brief, page 12).

When appellant's nonobviousness arguments are weighed against the examiner's reasons for obviousness of the claimed invention, we find that the appellant has presented a far more convincing case than the examiner. If the wiper motor of Gille were modified in accordance with the teachings of Alessio to slow down when overloaded or stalled, rather than being deenergized, we agree with appellant's argument (Reply Brief, page 4) that the modified circuit in Gille still would not be able to "switch from a high motor speed input to a low motor speed input" because Alessio lacks such a switch, and does not operate in such a manner. We likewise agree with appellant's arguments (Brief, pages 12 and 14) that any slowing of the wiper motor in Gille based upon the circuit technique taught by Alessio would likely lead to stalling because of the friction load created by a slow moving wiper on a dry windshield. Thus, we agree with the

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appellant that the skilled artisan would not have found it obvious to use the hand-held portable tool circuit teachings of Alessio to change the speed of the wiper motor in Gille.

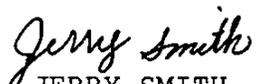
The 35 U.S.C. § 103 rejection of claims 1, 2, 5, 9, and 10 is reversed.

DECISION

The decision of the examiner rejecting claims 1, 2, 5, 9, and 10 under 35 U.S.C. § 103 is reversed.

REVERSED


KENNETH W. HAIRSTON
Administrative Patent Judge)
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ERROL A. KRASS
Administrative Patent Judge)
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JERRY SMITH
Administrative Patent Judge)
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