Paper No. 13

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte DALE O. STOLLSTEIMER,
RAYMOND S. ALVEY,
PATRICK W. GIBSON and
TODD A. SNOVER

_____

Appeal No. 1996-3058
Application 08/192,520[1]

_____

ON BRIEF

_____

Before HAIRSTON, KRASS, and HECKER, ***Administrative Patent Judges***.

HECKER, ***Administrative Patent Judge.***

DECISION ON APPEAL

[1] Application for patent filed February 7, 1994.

This is a decision on appeal from the final rejection of claims 1 and 21[2] through 26, all of the claims pending in the application.

The invention relates to a position-encoding system which includes a device adapted to shift gears of a motor vehicle. The position encoder includes a substrate and conductive material disposed thereon such that the conductive material forms patterns. The patterns are composed of a series of states, each state composed of either a presence or an absence of conductive material. The encoder has a plurality of regions characterized by the patterns. Some regions indicate gears and some indicate intermediate positions between gears. Upon move-ment from any first gear to any second gear, one state remains constant from the first gear and changes only upon arrival at

[2] Claim 21 was canceled in the amendment after final rejection, Paper No. 6, and its limitations were inserted into claim 1.

the second gear. In particular, referring to Figure 2, disk 21 comprises an electrically insulating substrate with conductive material 23 represented by hatched shading. Coding is represented by five tracks 24, 26, 28, 30 and 32. Various regions represent different gear states, i.e., 102-two-wheel-drive high, 105-four-wheel-drive low or neutral, 107-four-wheel-drive high.

Sole independent claim 1 is reproduced as follows:

1. A position-encoding system comprising:

a device adapted to shift gears of a motor vehicle; and

an encoder coupled to said device to indicate the current gear, said encoder further comprising:

a substrate; and

conductive material disposed on said substrate, such that said conductive material forms patterns composed of a series of states, each state composed of either a presence or an absence of conductive material, wherein said encoder has a plurality of regions characterized by said patterns, some of said patterns indicating gears and some of said patterns indicating intermediate positions between gears, wherein upon movement from any first said gear to any second said gear, one

said state remains constant from said first gear and changes only upon arrival at said second gear;

wherein all said conductive material which forms said patterns is electrically connected.

The reference relied on by the Examiner is as follows:

Welch et al. (Welch) 4,664,217 May 12, 1987

Claims 1 and 22[1] through 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Welch.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the brief and the answer for the details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that claims 1 and 22 through 26 are properly rejected under 35 U.S.C. § 103.

At the outset, we note that Appellants have indicated on page 3 of the brief the claims stand or fall

together. Therefore, claim 1 will be considered the representative claim.

Appellants argue:

> Figure 4 of Welch et al. illustrates a contact plate 122 having first conductive material 60 and second conductive material 65. These conductive materials are electrically isolated from one another (Welch et al. at col. 8, lines 20-22). Conversely, Claim 1 of the present application recites that all conductive material is in electrical contact. (Brief-page 4.)

Looking at claim 1 we see "wherein all said conductive material which forms said patterns is electrically connected."

The Examiner responds:

> The conductive surfaces 60 and 65 [of figure 4] are separate due to the respective clockwise or counterclockwise rotation of plate 122.
>
> However, in each instance of rotation, for instance clockwise, it is clear that the conductive material 60 which forms the pattern is electrical[ly]

> conductive and when rotated in counterclockwise direction the conductive material 65 which forms the pattern is electrical[ly] conductive, see col. 8, lines 35-52.
>
> It is submitted that while the conductive surfaces 60 and 65 may be electrically separate due to counterclockwise or clockwise rotation of plate 122, all of the conductive material which forms the pattern is electrically connected. (Answer-page 7.)

We agree with the Examiner, while Appellants have **one** set of patterns which are claimed as "*electrically connected*," Welch has **two** sets of patterns, each of which is *electrically connected*. Appellants' "comprising" language does not preclude a second set of patterns. Additionally, Welch's figure 5 contains one set of patterns of conductive material 61 which is electrically connected.

Appellants further argue:

> In moving from gear 4L to 2H in Figure 5 of Welch et al., none of the states remains constant from gear 4L and changes only upon arrival at gear 2H. The state measured by contact 223C is

> “0" at gear 4L and changes to “1" at about the 9 o’clock position on contact plate 61 (near gear 4H -- not at gear 2H). The state measured by contact 223D is “0" at gear 4L and changes to “1" almost immediately (not at gear 2H). The state measured by contact 223E is “1" at gear 4L and changes to “0" at about 9 o’clock (near gear 4H -- not at gear 2H). The state measured by contact 223F is “1" at gear 4L and changes to “0" almost immediately (not at gear 2H).

Note that Claim 1 of the present application has the

following limitation:

> ... wherein upon movement from <u>any</u> first said gear to <u>any</u> second said gear, one said state remains constant from said first gear and changes only upon arrival at said second gear...(emphasis added)
>
> The above discussion of the states encountered upon movement from gear 4L to gear 2H in Figure 5 of Welch et al. demonstrates that the just-recited limitation from Claim 1 is not present in the Figure 5 embodiment of Welch et al. <u>No state</u> remains constant upon moving from gear 4L and changes only upon arrival at gear 2H. Thus, the just-recited limitation from Claim 1 is not

present in Welch et al. (Brief-page 5.)

We note that Appellants' claim 1 recites "movement from any first said gear to any second said gear". We interpret **any** to mean **any**, not **any and all**. Therefore, Welch meets the recited claim language if a movement from any one gear in Welch to any other gear in Welch meets the recited claim language. Appellants have selected movement from 4L to 2H in Figure 5 of Welch. However, we note that the claim is met if movement is from 4L to 4H (223E), N to 4H (223E and 223C), N to 4L (223F) and 2H to 4H (223F). Thus, the recited claim limitation is met by Welch. We also note that either pattern set (60 or 65) in Figure 4 of Welch meets the recited claim limitation.

We refer to the Examiner's Answer for the explanation of where Welch teaches the remaining (unargued) limitations of claim 1, and thereby anticipates Appellants' claim 1. Lack of novelty is the ultimate of obviousness. See ***In re Fracalossi***, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). Thus, we will sustain the 35 U.S.C. § 103 rejection of

claim 1, and hence, claims 22 through 26 (all claims standing or falling together). In view of the foregoing, the decision of the Examiner rejecting claims 1 and 22 through 26 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
ERROL A. KRASS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
STUART N. HECKER Administrative Patent Judge	)	

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