

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SIEGFRIED RUMP

Appeal No. 1998-0675
Application No. 08/423,512

HEARD: August 16, 2001

Before JERRY SMITH, DIXON, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 1-9 and 11-17. We reverse.

BACKGROUND

The invention at issue in this appeal adapts the triggering of an automatic braking operation of a motor vehicle. The automatic braking operation produces a brake pressure higher than that corresponding to the position of a

brake pedal. More specifically, the invention adapts the triggering to the driving situation existing during each braking maneuver by taking into account three factors. The first factor is the speed of return of an accelerator pedal. In emergencies, an accelerator pedal is suddenly returned to rest as the driver reduces the driving power of his vehicle. At high return speeds of the accelerator pedal, accordingly, the value for the speed of actuation of the brake pedal is lowered.

The second factor is the time between the reaching of the idling position of the accelerator pedal and the actuation of the brake. A long period therebetween implies that the vehicle is running down to a standstill under control. Accordingly, the triggering threshold for the automatic braking operation is raised. The third factor is the time between the driver's placing his foot on the brake pedal and his application of the brakes. A long period therebetween implies that the driver is ready to brake but purposefully delays application of the brake. Accordingly, the triggering threshold is raised. Accounting for the three factors permits

the invention to differentiate between emergency braking, in which the automatic braking operation is to be triggered, and routine, "target" braking, in which the triggering of the automatic braking operation is not to be triggered.

Claim 1, which is representative for our purposes, follows:

1. A method of determining triggering sensitivity of an automatic braking operation in a motor vehicle in dependence on a driving situation, comprising the steps of

(a) taking as a criterion for triggering of the automatic braking operation when a braking manoeuvre [sic] is carried out in excess of a threshold value of a speed of brake pedal actuation;

(b) automatically building up a brake pressure higher than that resulting from a position of the brake pedal after the triggering of the automatic braking operation;¹

(c) presetting a fixed threshold value for brake pedal actuation speed;

¹At oral hearing, the appellant's attorney questioned whether the claims are indefinite; he said that step (b) should be written as the last step of claim 1. Because there is no rejection under 35 U.S.C. § 112, ¶ 2, for indefiniteness before us, we will not address the question. If the appellant wishes to amend the claims, he may file a continuation application.

(d) ascertaining at least one factor dependent on the driving situation in time-based dependence on at least one of the brake pedal actuation during a braking manoeuvre [sic] and on pedal actuations preceding the braking manoeuvre[SIC]; and

(e) determining a new threshold value as a product of the ascertained at least one factor dependent on the driving situation and the fixed threshold value to differentiate between emergency braking requiring the automatic braking operation and target braking which does not require the automatic braking operation.

The prior art applied in rejecting the claims follows:

Reichelt et al. (Reichelt) 1992	5,158,343	Oct. 27,
Rump et al. (Rump) 1995	5,445,444	Aug. 29,

(filed Apr. 8, 1994).

Claims 1, 2, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being obvious over Reichelt. Claims 3-6, 9, and 11-17 stand rejected under § 103(a) as being obvious over Reichelt in view of Rump. Rather than reiterate the arguments of the appellant or examiner in toto, we refer the reader to the brief and answer for the respective details thereof.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 1-9 and 11-17.

Accordingly, we reverse. We begin by noting the following principles from

In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

With these principles in mind, we consider the examiner's rejection and the appellant's argument.

The examiner asserts, "Reichelt et al. Teach [sic] obtaining a signal which is based upon gas pedal return speed which meets the claimed limitation of ascertaining at least one factor dependent on a driving situation based upon pedal

actuations preceding the braking manoeuvre [sic]; and determining, based upon a given driving situation and a fixed threshold value, a second threshold value which may be used in order to terminate the automatic braking operation."

(Examiner's Answer at 4-5.) The appellant argues, "a new threshold value is never determined in Reichelt et al. and certainly not as a 'product of the ascertained at least one factor dependent on the driving situation and the fixed threshold value', which new threshold value is used for the triggering criterion during a braking manoeuvre [sic]."

(Appeal Br. at 15.)

Claims 1-9 and 11-17 specify in pertinent part the following limitations: "ascertaining at least one factor dependent on the driving situation in time-based dependence on at least one of the brake pedal actuation during a braking manoeuvre and on pedal actuations preceding the braking manoeuvre; and ... determining a new threshold value as a product of the ascertained at least one factor dependent on the driving situation and the fixed threshold value" Accordingly, the limitations require determining, during

operation, a new threshold value of a speed of brake pedal actuation as a product of a factor dependent on the driving situation and a fixed threshold value.

The examiner fails to show a teaching or suggestion of the limitations in the prior art of record. Reichelt uses a threshold value of a speed of brake pedal actuation. Specifically, "it is checked in a first step 1 whether the actuating speed of the brake pedal v_{BP} has exceeded a predetermined first threshold value $v_{BPthreshold1}$. Col. 2, ll. 62-65. Although $v_{BPthreshold1}$ is used, it is not determined during operation, let alone determined as a product of inter alia a factor dependent on a driving situation. To the contrary, the first threshold value is "predetermined." Id. at l. 64. Specifically, $v_{BPthreshold1}$ is predetermined based on an "order of magnitude of ... the maximum possible brake pedal angle." Id. at ll. 65-68. The predetermined first threshold value is "the only criterion for initiating an automatic braking operation" Col. 5, ll. 7-8.

Relying on Rump to "disclose[] that a threshold which relates to a speed of brake pedal actuation is indeed used[,]" (Examiner's Answer at 6), the examiner fails to allege, let alone show, that the secondary reference cures the deficiency of Reichelt. Because the latter reference predetermines $V_{BPthreshold1}$ based on an order of magnitude of the maximum possible brake pedal angle, we are not persuaded that the reference discloses or would have suggested the limitations of "ascertaining at least one factor dependent on the driving situation in time-based dependence on at least one of the brake pedal actuation during a braking manoeuvre and on pedal actuations preceding the braking manoeuvre; and ... determining a new threshold value as a product of the ascertained at least one factor dependent on the driving situation and the fixed threshold value" Therefore, we reverse the rejection of claims 1, 2, 7, and 8 as being obvious over Reichelt and of claims 3-6, 9, and 11-17 as being obvious over Reichelt in view of Rump.

CONCLUSION

In summary, the rejection of claims 1-9 and 11-17 under
103(a) is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
LANCE LEONARD BARRY)	
Administrative Patent Judge)	

Appeal No. 1998-0675
Application No. 08/423,512

Page 10

EVENSON, MCKEOWN, EDWARDS & LENAHAN
SUITE 700
1200 G STREET NW
WASHINGTON, DC 20005