

Commissioner's Decision #1239
Décision du Commissaire #1239

TOPIC: B00; B20; B22; C00; F00; OO
SUJET: B00; B20; B22; C00; F00; OO

Application No: 2,049,578
Demande No: 2,049,578

COMMISSIONER'S DECISION SUMMARY

C.D. 1239 Application No. 2,049,578 (B00; B20; B22; C00; F00; OO)

The application and all of its claims were rejected on a variety of grounds such as obviousness, etc.

The application relates to a system which is to be installed in a vehicle, particularly an automobile, to assist in avoiding collisions with other vehicles. The examiner rejected both the application and all of the claims on the grounds that (1) the claims were both inexplicit and indefinite and claim the invention in terms of desired results or objectives, (2) more than one invention was being claimed, (3) the existence of a large number of references rendered the claims either anticipated and/or obvious and (4) that there was insufficient disclosure of how to construct the claimed arrangements. The Board recommended that the rejection of the application and claims be reversed and that the application be returned to the examiner for further prosecution, a recommendation which was accepted by the Commissioner of Patents.

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,049,578, having been rejected under Subsection 30(4) of the Patent Rules, the Applicant asked that the Final Action of the Examiner be reviewed. The rejection has consequently been considered by the Patent Appeal Board and by the Commissioner of Patents. The findings of the Board and the ruling of the Commissioner are as follows:

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This decision deals with the Applicant's request for a review by the Commissioner of Patents of the Examiner's Final Action dated February 21, 1997 on patent application number 2,049,578 (International Classification G01S-017/42) filed on August 19, 1991 and entitled "COLLISION AVOIDANCE SYSTEM". The Applicant is Kollmorgen Corporation, assignee of inventor William H. Taylor. In the Final Action, the Examiner rejected all of the claims of the application, as well as the application itself, on the grounds that, (1) the claims are both inexplicit and indefinite and claim the invention in terms of desired results or objectives, (2) more than one invention is being claimed, (3) the existence of a large number of prior art references renders the invention either anticipated and/or obvious and (4) there is insufficient disclosure of how to construct the claimed arrangements. The Applicant replied on August 20, 1997 contesting the Examiner's rejections, requesting a review by the Board and also cancelling claims 25 to 36 and 39 to 45; thus leaving original claims 1 to 24, 37, 38 and 46 to 51 in the application as claims 1 to 32.

The application relates to a system which is installed in a vehicle, particularly an automobile, to assist in avoiding collisions with other vehicles. Figure 2 appearing below shows a general perspective illustration of the rangefinder scanner used in Applicant's collision avoidance system:

Claims 1 and 25 which are representative of the remaining rejected claims read as follows:

1. A collision avoidance system comprising:
 - rangefinder scanner means mounted to a first vehicle for determining range and angle of at least one target; and
 - processor means for tracking target range and angle, said processor means predicting time of intercept of said target, and calculating the rate of change of separation distance between said target and said first vehicle, calculating the acceleration of said separation distance, and predicting the distance between said target and said first vehicle at the said predicted time of intercept, when said first vehicle is approaching said target on a variety of path geometries including a curved path, a sloped path and a straight path.
25. A rangefinder method comprising the steps of:

providing a rangefinder scanner having transmission means for transmitting a light pulse toward a pixel in a scene and receiving channel means for receiving and detecting said light pulse reflected from a target, said receiving channel means including rotating scanning disc and detector; activating said transmission means to emit a light pulse toward a pixel in the scene; querying said detector for at least one range interval subsequent to transmission of said light pulse to detect said pulse reflected from a target in the scene; and determining the range of the target based upon the elapsed time between transmission of said pulse and detection of said reflected pulse.

The questions before the Board are therefore whether or not remaining claims 1 to 32 are, (1) inexplicit and indefinite, (2) claim more than one invention, (3) are either anticipated or rendered obvious by the cited prior art and (4) whether or not they are adequately supported by the disclosure.

With respect to the first objection of claim indefiniteness the Examiner has referred to various expressions used in the claims, such as Apredicting the distance between said target and said vehicle at said predicted time of intercept@ (claim 1), Ameans for implementing collision avoidance maneuvers@ (claim 3), Ameans for equalizing detector response irrespective of target distance@ (claim 24), and has argued that these expressions render the claims in which they occur both indefinite and inexplicit and amount to merely claiming desired objectives or results. In its reply the Applicant has discussed each of the expressions objected to insofar as they apply to the remaining claims, in some cases referring to the points in the disclosure where the expressions are explained in detail. The Board has considered the Applicant=s explanations and is satisfied that the expressions used are adequately defined in the disclosure and/or are sufficiently explicit as and of themselves so that their use in the claims does not render those claims indefinite, inexplicit or merely statements of desired objectives or results.

With respect to the Examiner=s second point of objection relating to the application claiming more than one invention the Board notes that the Applicant has deleted former claims 25 to 36 and 39 to 45 leaving claims which are now directed to a collision avoidance system and a rangefinder method. The Board therefore agrees with the Applicant that the application now meets the requirements of Section 36 of the Patent Act.

With respect to the third point of objection based on prior art the Board notes that the Examiner has cited a total of 13 references but has merely stated that they are cited to show that distance or range measurement with optical scanners is not new. The Examiner has made no attempt to show how the references apply to any of the rejected claims nor how they render the invention disclosed in the application either anticipated or obvious. In a previous response dated October 20, 1995 the Applicant discussed each of the cited references in some detail and took the position that none of them disclose alone or in combination the invention claimed and that they have no bearing on the inventive ingenuity of the invention as defined in the claims, a position with which the Board agrees. The Board therefore believes that the rejection of the claims and application in view of the prior art is not sustainable.

With respect to the fourth point of objection based on insufficient disclosure the Examiner has referred to each of the passages recited in his first point of objection and stated that they pertain to functions performed by blank Aboxes@ the structure of which has not been disclosed. It is further stated that what Applicant has disclosed is a system of mirrors and that the remainder of the

claimed features amount only to an invitation for others to make the various aspects of the invention which the Applicant claims in its claims. However after careful consideration the Board agrees with the Applicant that the disclosure is sufficient to show how to fill in the Ablank boxes@ referred to by the Examiner.

Accordingly the Board recommends that the rejection of both the application and remaining claims 1 to 32 be withdrawn and that the application be returned to the Examiner for further prosecution consistent with the recommendation.

P.J. Davies
Chairman

M. Howarth
Member

M. Wilson
Member

I concur with the recommendation of the Patent Appeal Board and therefore return the application to the Examiner for further prosecution consistent with the recommendation.

A. McDonough
Acting Commissioner of Patents

dated at Hull, Quebec
this 14th day of May, 1999