



US005691693A

United States Patent [19]
Kithil

[11] **Patent Number:** **5,691,693**
[45] **Date of Patent:** **Nov. 25, 1997**

[54] **IMPAIRED TRANSPORTATION VEHICLE OPERATOR SYSTEM**

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[21] Appl. No.: **535,576**
[22] Filed: **Sep. 28, 1995**

[51] **Int. Cl.⁶** **B60Q 1/00**
[52] **U.S. Cl.** **340/439; 340/575; 340/576;**
180/272
[58] **Field of Search** 340/439, 438,
340/437, 575-76; 364/424.04; 180/272

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[57] **ABSTRACT**

A system for detecting impairment of operating ability of transportation vehicle operators due to sleepiness, intoxication or other causes, and for sounding an alarm when operator impairment is found. The invention employs an array of at least three dual electrode capacitive coupling sensors, placed in the headliner above the operator's seat, which sense operator head position and motion. Outputs from the sensors, after suitable processing and amplification, are analyzed by a microprocessor to determine the operator's head position and motion, through triangulation analysis of distances from the operator's head to each sensor. The microprocessor records, tracks and compares the operator head motion data to profiles of normal head motion and impaired head motion, to detect any head motion indicative of operator impairment. When operator impairment is thus determined, the microprocessor activates any of a variety of warning devices, to warn and alert the operator and possibly also operators of other nearby vehicles, that there is a state of operator impairment.

19 Claims, 2 Drawing Sheets

