

- [54] **DRIVING SIMULATOR WITH MOVING PAINTED DASHBOARD**
- [75] **Inventors:** Max L. Behensky, Hayward; Rick L. Moncrief, Santa Clara; Jed Margolin, San Jose; Stephanie J. Mott, Sunnyvale, all of Calif.
- [73] **Assignee:** Atari Games Corporation, Milpitas, Calif.
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- [58] **Field of Search** 364/578, 521, 522; 434/30, 37, 38, 47, 62, 69

4,660,157 4/1987 Beckwith et al. 364/522

Primary Examiner—Thomas G. Black
Attorney, Agent, or Firm—Ronald C. Fish

[57] **ABSTRACT**

A driving simulator for a video game is disclosed. It includes an apparatus and method for moving the visual display of the dashboard relative to the visual display of the outside scene by horizontal scrolling when the car is being turned. A model processor calculates an acceleration vector acting on the drivers head based upon conditions affecting the vehicle such as acceleration during turns. This acceleration vector is scaled and converted to an integer from floating point. The integer value is then digitally low pass filtered to eliminate the graininess of the discrete nature of the process. Finally two routines are called which use the integer data to calculate where the dash, mirror and cab sidepost are to be displayed in the scene of the simulated environment displayed to the driver. Another routine is then called to load the appropriate data into the hardware which performs the scrolling.

[56] **References Cited**

U.S. PATENT DOCUMENTS

- 4,196,528 4/1980 Foerst 364/578 X
- 4,209,832 6/1980 Gilham et al. 364/521
- 4,383,827 5/1983 Foerst 434/69
- 4,631,691 12/1986 Pica 364/521

16 Claims, 9 Drawing Sheets

